User Manual

AvantGuard®

Electric Bed

LI158Bx/1200

Hill-Rom®
A HILLENBRAND INDUSTRY

QD2300
Rev.005

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NOTES:

Chapter 1
Symbols / destination

Symbol Definition

This manual contains different typefaces and icons designed to improve readability and increase understanding of its content. Note the following examples:

- Standard text - used for regular information.
- **Boldface text**- emphasizes a word or phrase.
- NOTE - sets apart special information or important instruction clarification.
- The symbol below highlights a paragraph:
  WARNING or CAUTION!

Warning / caution

  - A **WARNING** identifies situations or actions that may affect patient or user safety. Disregarding a warning could result in patient or user injury.
  - A **CAUTION** points out special procedures or precautions that personnel must follow to avoid equipment damage.

- The symbol below highlights a CAUGHT HAZARD WARNING:

Caught Hazard Warning

- The symbol below highlights a CHEMICAL HAZARD WARNING:

Chemical Hazard Warning

- The symbol below highlights a:
  ELECTRIC SHOCK HAZARD:

Electric Shock Hazard

General Symbols

Attention, read the safety instructions carefully and refer to the user manual.

DO NOT BIN, follow the local recycling regulations.

Recyclable Material

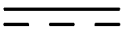
Safety Earth

Equipotential terminal

Class II Device

Type B Equipment

Direct Current



Alternating Current

Intended Use

The AvantGuard® line of hospital beds includes acute care beds (Trendelenburg with battery backup is a mandatory requirement for acute care beds) and general-purpose variable height hospital beds for general care, for use in post-operative care, and general medicine wards. They are designed with the needs of the whole medical team in mind and facilitate the use of monitoring equipment and the transfer of patients to examination wards.

Before placing the patient on the bed

Carry out individual risk assessments including but not limited to:

- Caught Hazard
- Potential falls from the bed
- Confused patients
- Patients with learning difficulties
- Small children
- Persons without the mental capacity to recognize unsafe actions
- Unauthorized persons

All persons authorized to use the bed's functions must be capable of doing so in a safe and controlled manner. In case of doubt, the bed's functions must be locked.

Bed model and country of use

Certain bed features may be available or not, depending on the destination country. These features are identified with an asterisk (*).

To identify your bed model and serial number (HRP000000), refer to the identification label (See "Overview" page 2-8). Your bed LI158Bx is composed of a chassis/bed frame identified CS158Bx and two endboards.

NOTES:

Introduction

Function Symbols

Manual Controls

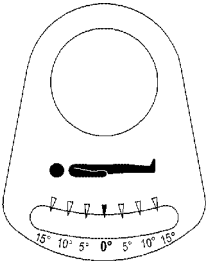
The following labels located next to the relevant control identify manual operations.

Head section "CPR"

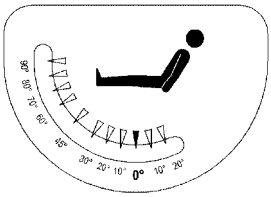
Adjustable foot section

Angle Indicators

Trendelenburg/Reverse Trendelenburg*



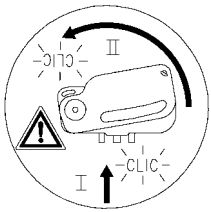
Head section*



NOTE:
These indicators are not measuring devices.

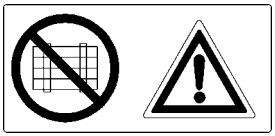
Warning and Caution Labels

Locking Mechanism on the Foot TotalGuard™* Siderail Support Label*



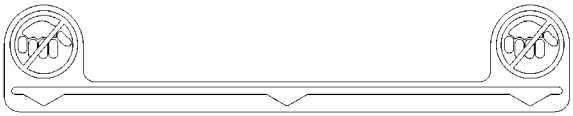
This label shows how to verify the locking mechanism on the foot TotalGuard™* siderail support.

Do Not Store label



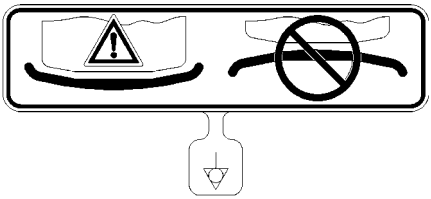
This label indicates that nothing should be left on the frame.

No Hand Placement Label*



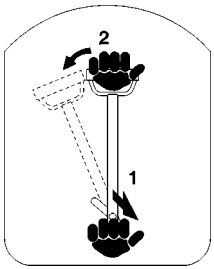
This label shows where hands should not be placed.

Headboard Positioning and Equipotential Terminal Label



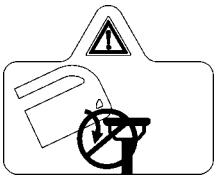
This label shows how the position of the polypropylene headboard can be checked and where the equipotential terminal is located.

Egress handle Usage Label*



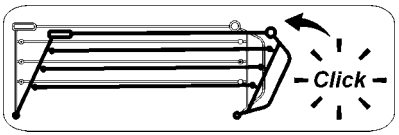
This label indicates the storage of the MobiBar® Egress handle.

Interference label MobiBar® and TotalGuard™*



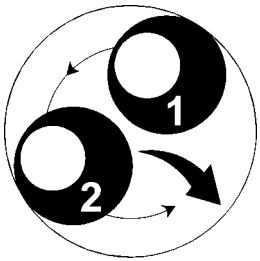
Never deploy the foot section of the TotalGuard™* integral siderail when the MobiBar® egress handle in position.

Locking mechanism on the long metal siderail*



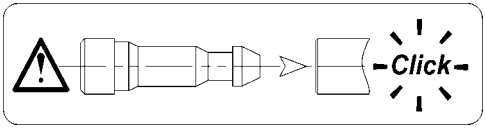
This label shows how to verify the locking mechanism on the long metal siderail.

Unlock long metal siderail label*



This label indicates how to unlock the long metal siderail.

Locking mechanism installation metal siderail label*

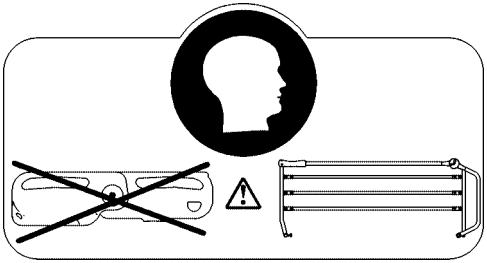


This label shows how to verify the locking mechanism during the installation of the long metal siderail.

Linen holder label*

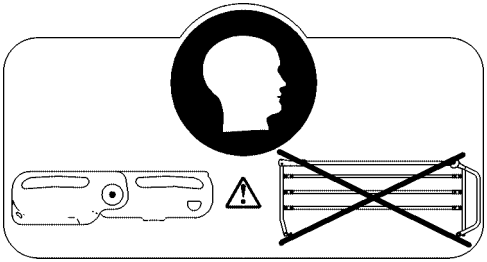
Never use the linen holder as a seat or as a foot step and never exceed the maximum load that can be placed on the linen holder.

Headboard and metal sierails identification label*



This label indicates to place the headboard on the head end on the bed. This type of headboard must be only used on beds with long metal siderails or beds without siderails.

TotalGuard™* headboard* and metal siderails identification label



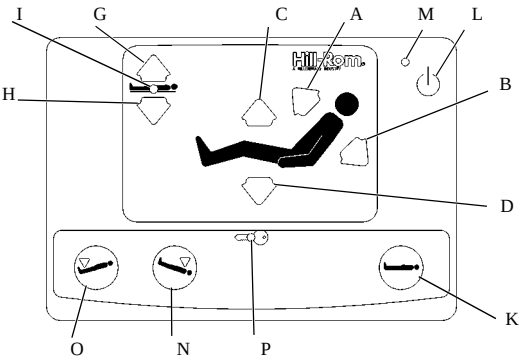
This label indicates to place the headboard on the head end on the bed. This type of headboard must be only used on beds fitted with TotalGuard™* siderails.

Plastic footboard identification label

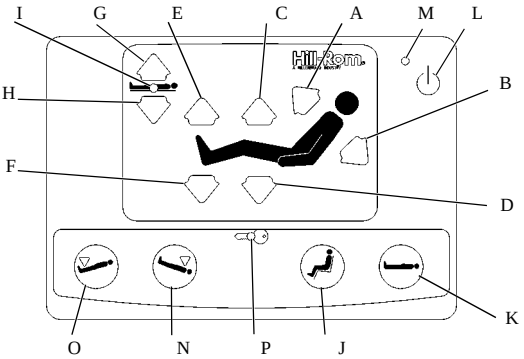
This label indicates to place the footboard at the foot end of the bed.

Electrical controls

Control pendant without EasyChair®*



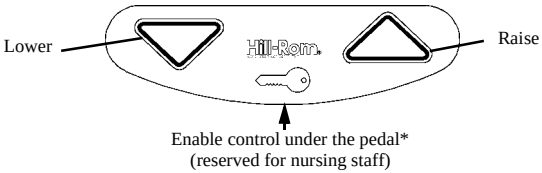
Control pendant with EasyChair®*



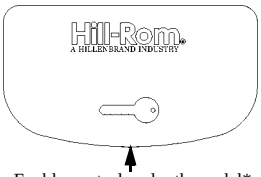
Functions available to the patient and caregiver:	
A Head section raise	F Foot section lower
B Head section lower	G Hilow raise
C Thigh section raise	H Hilow lower
D Thigh section lower	I Bed non-low position indicator
E Foot section raise	

Functions available only to the caregiver:	
J EasyChair® position	N Trendelenburg
K Return to flat sleep surface	O Reverse Trendelenburg
L Battery switch activation	P Function management indicator
M Power indicator	

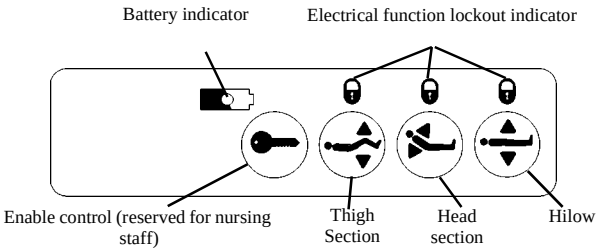
Bilateral HiLow Pedal*



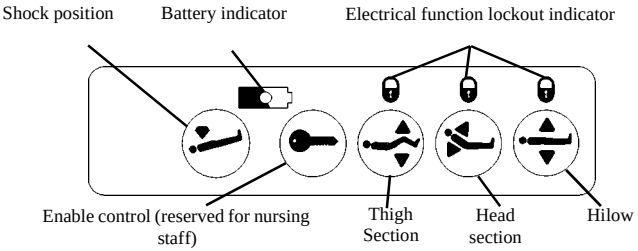
Enable control pedal*



Lateral caregiver unit (without emergency Trendelenburg*)l

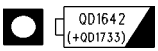


Lateral caregiver unit (with emergency Trendelenburg*)



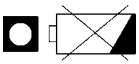
Power supply

Battery

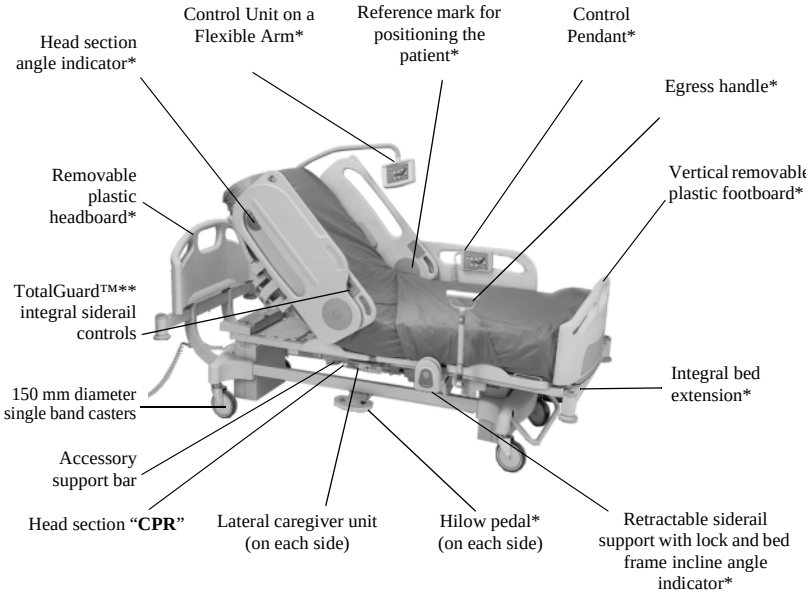


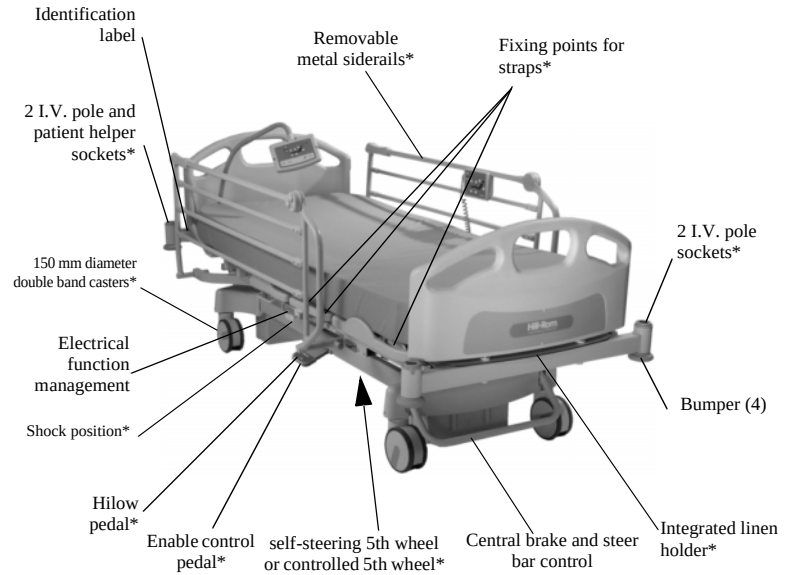
This label confirms that the bed's operational functions remain available in the event of a power outage.

No battery



Overview


Head section angle indicator*
Control Unit on a Flexible Arm*
Reference mark for positioning the patient*
Control Pendant*
Egress handle*
Removable plastic headboard*
Vertical removable plastic footboard*
TotalGuard™** integral siderail controls
150 mm diameter single band casters
Integral bed extension*
Accessory support bar
Head section "**CPR**"
Lateral caregiver unit (on each side)
Hilow pedal* (on each side)
Retractable siderail support with lock and bed frame incline angle indicator*



*Equipment varies depending on bed model

Standard Features

Sleep surface dimensions		90 x 200 cm	■
Frame	Polypropylene hard surface	Yes	■
Selective electrical function lockout		Yes	■
Electrical adjustable Trendelenburg/Reverse Trendelenburg		Yes	■
Adjustable head section	Damped CPR release	Yes	■
	Comfort adjustment	Yes	■
Adjustable thigh section	Power-driven with autocontour	Yes	■
Central brake and steer system		Yes	■

Equipment varies depending on bed model*

Adjustable foot section	Mechanical	☐
	Electrical	☐
Automatic EasyChair®		☐
Emergency Trendelenbug (mandatory requirement for acute care beds)		☐
Adjustable HiLow	From 40 to 80 cm	☐
	From 45 to 85 cm	☐
Without siderails		☐
Integrated siderails TotalGuard™*		☐
Long metal siderails		☐
Battery backup		☐
Control pendant (patient)		☐
Control pendant (nursing staff)		☐
Control unit on flexible arm		☐
Bilateral HiLow pedal		☐
Enable control pedal		☐
Casters	125 mm diameter single band	
	150 mm diameter single band	☐
	150 mm diameter double band	☐
	150 mm diameter antistatic double band	☐
	150 mm diameter antistatic single band	☐
Directional caster at foot end of bed		☐

Bed connected to AC power, brake not applied detection		☐
Self-steering 5th wheel		☐
Controlled 5th wheel		☐
MobiBar® egress handle		☐
Integral bed extension at foot end of bed		☐
Integrated linen holder		☐
Accessory support bar, 2 hooks		☐
Accessory support bar, 6 hooks		☐
Multiple bag support		☐
Headboard and footboard	Standard polypropylene headboard and footboard	☐
	Standard polypropylene headboard and lockable footboard	☐
	Medispace™ headboard and footboard	☐
	Sequoia headboard and footboard	☐
	Medic'hotel™ headboard and footboard	☐

Accessories

AC908A	2-receptacle bottle holder
AC932A	3P 1l pivoting stainless steel bottle holder
AC938A	3P 2l pivoting stainless steel bottle holder
AC961A	3-litre bottle holder for frame
AD016A	Semi-spherical drainage holder
AC991A	Triangular section drainage holder
AC959A	Oxygen cylinder holder
AC962A	3-litre bottle holder for foot end
AD101A	Oxygen cylinder holder
AD102A	Oxygen cylinder holder
AC963A	Syringe-driver holder
AC968A	Equipotential cable
AD080B	Chrome-plated patient helper
AD081C	Chrome-plated adjustable patient helper
AD082A*	Stainless steel I.V. pole
AD165A*	I.V. pole
AC953A	Chrome-plated I.V. hooks on patient helper

AD128A	Monitor stand
AC923A	Label holder
AD126A	Accessory support bar
AD127A	Medical device support rail
AD069A	Bultex® comfort mattress
AD162A	Extension cushion for Bultex® comfort mattress
AD066A	Cliniplot® III mattress
AD076A	Extension cushion for Cliniplot ® III mattress
AD085A	Primo™ dynamic low pressure mattress system
AD117A01	Mattress Clinisert® 2 (High resilience insert/sewn and taped cover)
AD118A01	Mattress Clinisert® 2 (High resilience insert/welded cover)
AD119A01	Mattress Clinisert® 2 (Visco-elastic insert/sewn and taped cover)
AD120A01	Mattress Clinisert® 2 (Visco-elastic insert/welded cover)
AD164A	Extension cushion for Clinisert® 2
AD140A	Duo® 2 Multi Mode Mattress System
AD177A*	MobiBar® egress handle
AD135A	Self-steering 5th wheel
AD180A	Controlled 5th wheel
AD171A	Bilateral HiLow pedal
AD139A	Linen holder
AD128A	Monitor stand
AD142A	Removable frame
AD166A	Control unit on flexible arm without EasyChair®
AD174A	Control unit on flexible arm with EasyChair®
AD167A	Control pendant for patient without EasyChair®
AD168A	Control pendant for nursing staff without EasyChair®
AD175A	Control pendant for patient with EasyChair®
AD176A	Control pendant for nursing staff with EasyChair®
AD178A	Long metal siderails
AD179A	Enable control pedal

NOTES:

Chapter 3
Installing the bed

Installing the Bed

First Steps

Before using the bed, it is essential to have a thorough understanding of this manual. This manual contains instructions for general use and maintenance and guarantees improved safety. Caregivers must have access to this manual.

Caregivers must be informed of the risks that may be encountered in the use of electric beds.

The many sources and types of accessories, hardware, or medical devices that may be used together with this bed do not enable Hill-Rom to guarantee both the safety and conformity of all the combinations thus created. The operator who creates these device combinations must therefore ensure that security and conformity requirements are met.

Before installing the bed for the first time or after bringing the bed and its accessories out of storage:

- ensure that the bed and its various parts are at room temperature.
- connect the bed to the mains power supply (See “Connection to the Mains Power Supply” page 3-2),
- make sure that all the moving parts are in good working order,
- make sure that the bed has been cleaned and disinfected (See “Cleaning” page 5-1).

Connection to the Mains Power Supply

The mains power supply for the bed must comply with relevant standards:

NF C 15-100 and NF C 15-211 (France).

International Electrotechnical Commission (IEC) 364 for other locations.

Check that the bed's power requirements on the identification label (See "Overview" page 2-8) correspond to the power supply voltage of the hospital.

The power supply should be equipped with a maximum 30 mA earth leakage circuit breaker, in compliance with IEC 364-5-53.

Chapter 4
Instructions for use

Use

Siderails

The Electric bed AvantGuard® can be fitted with two types of siderail:

- Integrated siderails TotalGuard™*
- Long, detachable metal siderails

⚠ WARNING:
Always ensure that there are no obstacles before raising or lowering a siderail (e.g., person's limb, objects, accessories). They are not designed to restrain or immobilize the patient. No containment devices must be fastened to the siderails (e.g. straps). Failure to do so could result in patient injury or equipment damage.

⚠ WARNING:
Evaluate patients for entrapment risk according to protocol, and monitor patients appropriately. Ensure that all siderails are fully latched when in the raised position. Failure to do either of these could result in serious injury or death.

NOTE:
Siderails are intended to be a reminder to the patient of the unit's edges, not a patient-restraining device. When appropriate, Hill-Rom recommends that medical personnel determine the proper methods necessary to ensure a patient remains safely in bed without being constantly observed.

TotalGuard™* integrated siderails

The Electric bed AvantGuard® fitted with TotalGuard™* siderails is able to receive a wide range of mattress widths (See “Mattress” page 8-4).

In order to achieve mattress/siderail combinations offering optimal comfort and safety, the bed can be configured with siderails in two retained and secure positions.

⚠ WARNING:

Do not place accessories (respiratory or other medical devices) on the siderail in a manner that could interfere with the complete storage of the foot siderail and thus block access to the release mechanism for lowering the siderail when emergency access to the patient could be required. The siderails must be handled according to the instructions in the user manual. Failure to do so could result in injury.

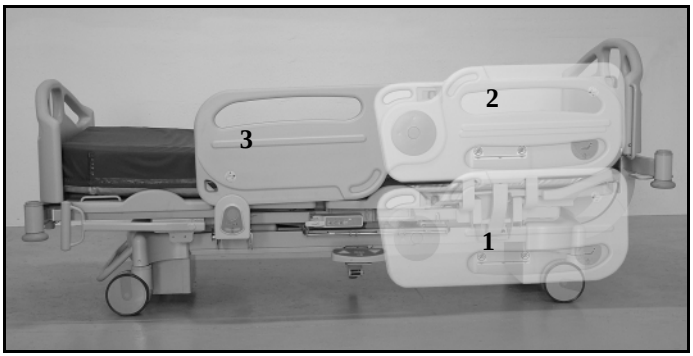
The TotalGuard™* integrated siderails are part of the frame. The siderails lift into the locked position and rotate from the head to the foot. The width of the bed is reduced when the siderails are in the low position.

When fully raised and locked, the siderails ensure patient protection and help to reduce the risk of falls.

Position 1: Siderail folded and in low position.

Position 2: Siderail folded and in high position.

Position 3: Siderail unfolded in high position.

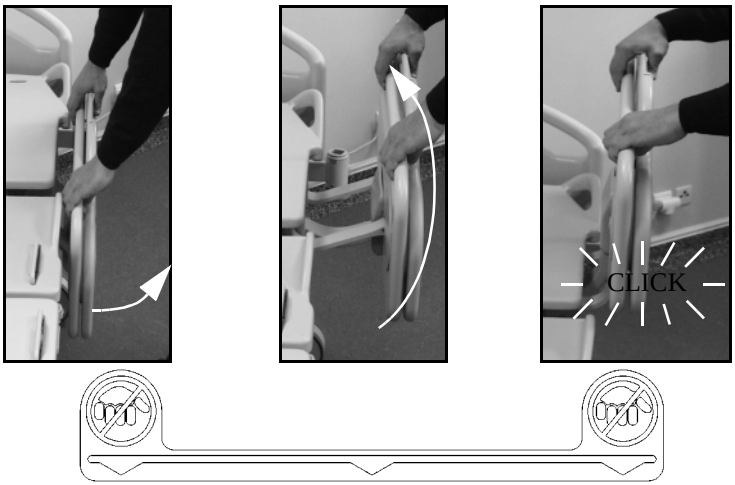


Raising the TotalGuard™* integrated siderails (position 2)

The siderails are located under the bed when not in use.

To raise a siderail:

- Pull the folded siderail outwards and upwards until it latches into the locked position as close to the edge of the mattress as possible without forcing.
- Verify the siderail is locked by pulling on the siderail.

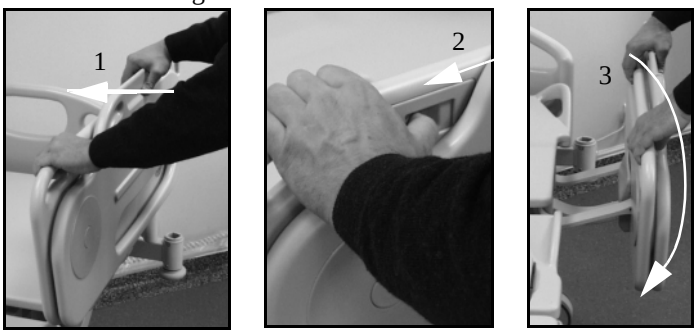


Lowering the TotalGuard™* siderails (position 1)

To lower a siderail:

- Make sure that the foot siderail is folded.
- Gripping the siderail by the handles, push it slightly inwards (1).
- Activate the unlocking button on the siderail (2).

Rotate the siderail downwards into the required low position (3), and release the unlocking button.

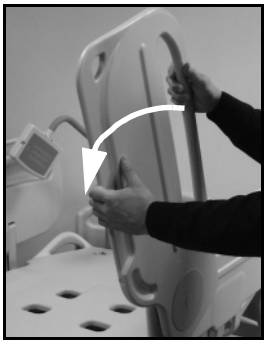


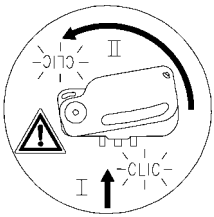
Unfolding the foot siderails (position 3)

CAUTION:
The foot section of the siderail must only be unfolded when the head section of the siderail is locked in the raised position. Failure to do so could result in equipment damage.

To unfold the foot section of the siderail:

- Grip the outer foot section of the siderail and rotate it to the foot end.
- Position the siderail in the support. The siderail is secure when it clicks into place.
- Verify the siderail is locked by trying to lift the foot section.





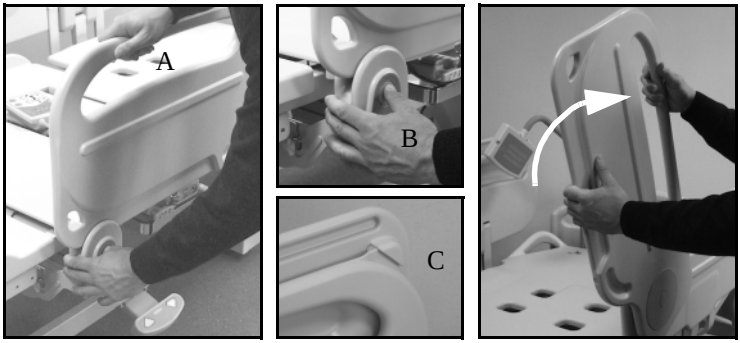
Storing the foot siderails (Position 2)

WARNING:

When storing the foot siderail, make sure that no objects or limbs are in the way. Failure to do so could result in patient injury or equipment damage.

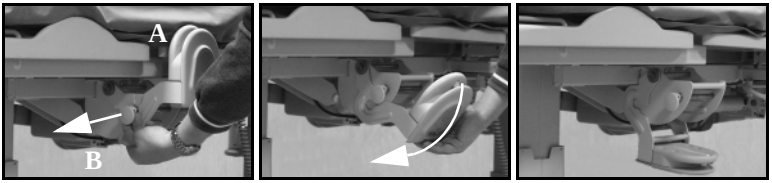
To store the foot section of the siderail:

- With one hand (A), grip the foot siderail by the handles.
- With the other hand, press the release button (B).
- Raise the siderail and rotate it towards the head end.
- Position the foot siderail in the support (C) provided for storage at the head end.



Foot Siderail Support

The foot siderail supports on both sides of the bed can be folded away, thus enabling the caregivers to move freely when transferring the patient to another platform.



To fold away a siderail support:

- Make sure that the foot siderail is folded.
- Hold the foot siderail support (A) with one hand.
- With the other hand, pull the release pin (B).
- Release the handle and swing the support beneath the sleep surface.

To raise a siderail support:

- Raise the foot siderail support until you hear a “click.”
- Verify the siderail support is locked by pulling on the siderail support.

Long metal siderails*

WARNING:

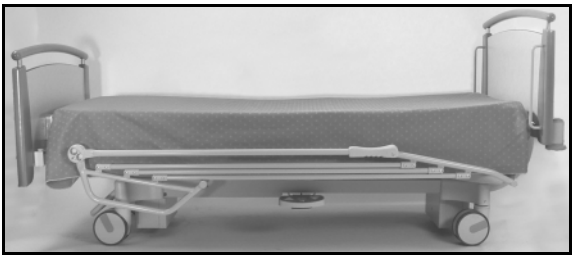
Do not place accessories (respiratory or other medical devices) on the siderail in a manner that could interfere with the siderail when emergency access to the patient could be required. The siderails must be handled according to the instructions in the user manual. Failure to do so could result in injury.

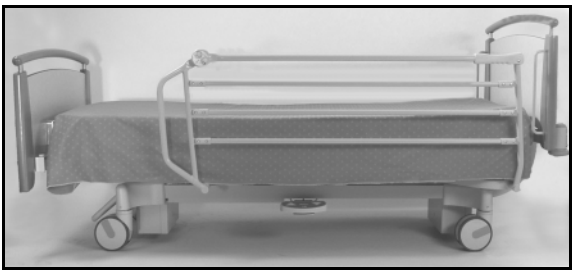
The metal siderails can be integrated in the frame and detached. Refer to the assembly instructions enclosed with the accessory for installation. The siderails are unfolded by raising them on the side of the bed. They are equipped with a double lockout system performing two functions.

When fully raised and locked, the siderails ensure patient protection and help to reduce the risk of falls.

Position 1: Siderail in low position.

Position 2: Siderail in high position.

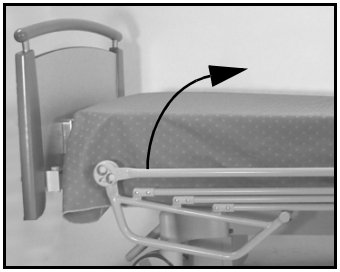


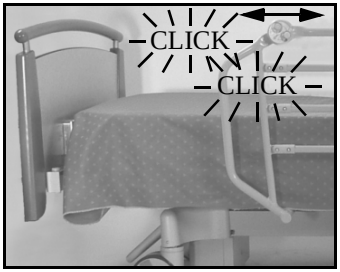


Raising the long metal siderails (position 2)

To raise a long metal siderail:

- Grip the upper bar and pull upwards until a double “click” is heard.
- Ensure the siderail is locked by pulling and pushing it.





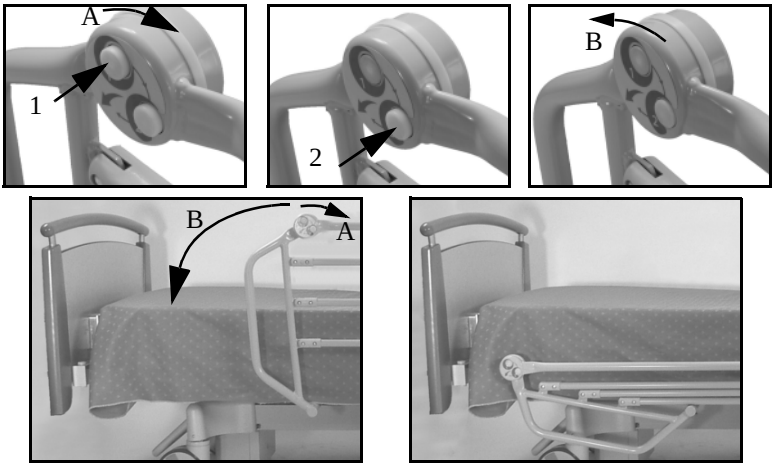
Lowering the long metal siderails (position 1)

WARNING:

If control pendant is present on the siderail, then remove it (See “Unclipping” page 4-46).

To lower a long metal siderail:

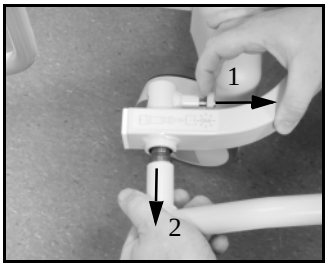
- Gripping the siderail by the upper bar.
- Push slightly (A) the siderail to the head end, then press and hold (1) the first unlocking button.
- Press the second unlocking button (2).
- Only release the two buttons after starting to lower the siderail.
- Rotate and push (B) the siderail downwards into the low position.

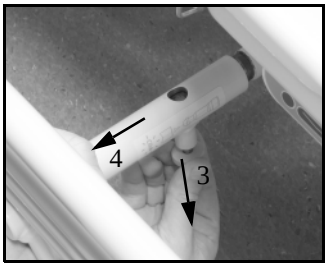


Removing a long metal siderail

To lower a long metal siderail:

- Lower the siderail (See “Lowering the long metal siderails (position 1)” page 4-9).
- On the head side: pull (1) the release pin, then pull (2) out the siderail, without removing it completely from its support.
- On the foot side: pull (3) the release pin, then pull (4) out the siderail, without removing it completely from its support.



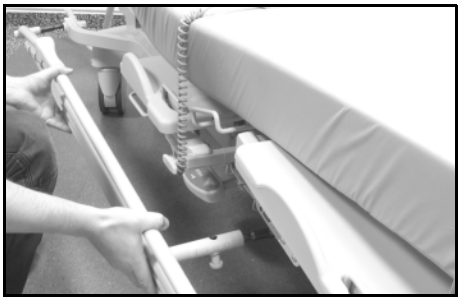


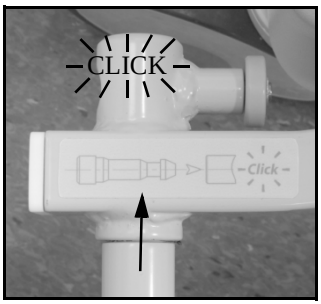
- Grip the siderail and remove it.

Raising a long metal siderail

To raise a long metal siderail:

- Grip the siderail and position it in the head and foot supports.
- Push on both pins until a “click” is heard.
- Check that the siderail is locked by pulling it.





- Check the correct operation of the siderail by lowering and raising it.

Electrical Functions

The bed's power-driven features are accessed by a control pendant, a bilateral HiLow foot pedal or a control unit on a flexible arm. Certain emergency functions are available on the lateral caregiver unit.

Control Pendant

⚠ WARNING:
Nursing staff need to assess whether the patient can be left unattended with the control pendant. Failure to do so could result in patient injury or equipment damage.

The bed can be equipped with a control pendant for the patient and a control pendant for the nursing staff. The control pendant provides access to the various power-driven features of the bed. The pendant can be secured in the housings provided in the siderails (See "Positioning" page 4-45). This mechanism allows the control pendant to be positioned as ergonomically as possible for the patient and the nursing staff.

For the functions, refer to "Electrical controls" page 2 - 6.

Control pendant for patients*

Control pendant for nursing staff*

The control pendant can be placed on the right-hand or left-hand side of the bed.

See the position in "Control Pendant*" page 4 - 44.

Control pendant on a flexible arm*

Patient side

Nursing staff side

The control unit on a flexible arm is equipped with a touchpad on both sides. One side is intended for the patient and the other side for the nursing staff. The arm can be positioned on the right-hand or left-hand side of the head section. To move the arm from one side to the other, see “Control unit on a flexible arm*” page 4 - 43.

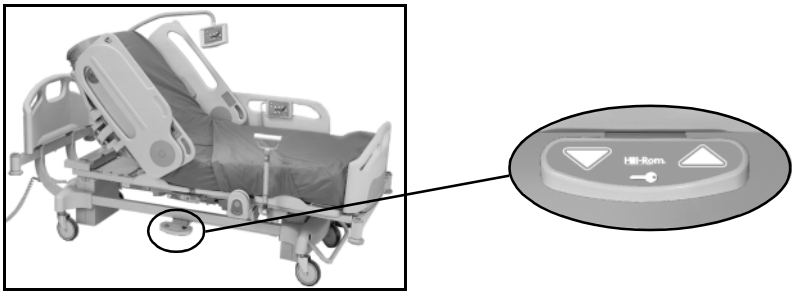
For the functions, refer to “Electrical controls” page 2 - 6.

Bilateral HiLow Pedal*

WARNING:
Ensure that no accessory or other device interferes with the use of the pedal. Failure to do so could result in patient injury or equipment damage.

This pedal is located centrally under the lower bed frame on each side.

Nursing staff can use this pedal to adjust bed height and activate or deactivate the function management mode while keeping their hands clean and free to deal with the patient.



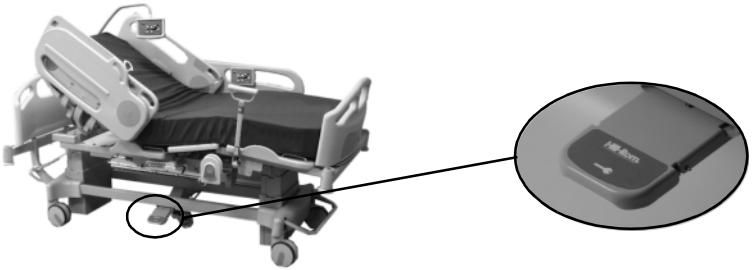
Enable key pedal*

⚠ WARNING:

Ensure that no accessory or other device interferes with the use of the pedal. Failure to do so could result in patient injury or equipment damage.

This pedal is located centrally under the lower bed frame on each side.

Nursing staff can use this pedal to activate or deactivate the function management mode while keeping their hands clean and free.



Electrical function management

⚠ WARNING:

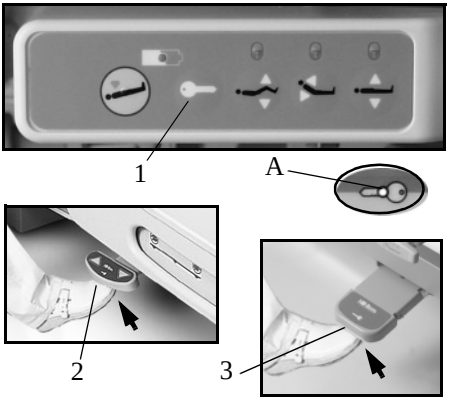
See “Safety Tips” page 8-1.

The electrical function management (nursing mode) selectively locks out or releases the power-driven functions of the bed according to the nurse’s patient management needs.

The functions to be locked out or released are selected on the control pendant or the control unit on the flexible arm after activation of the function management.

Activating/deactivating function management

- Press manually the enable control (1) on the lateral caregiver unit or, with the top of the foot, actuate control (2*), or (3*).
- The control pendant or control unit on a flexible arm indicator (A) is alight, the electrical function management is active.
- Press control (1), or (2*), or (3*) to deactivate the function management when the functions have been selected.



NOTE:
The Trendelenburg/Reverse Trendelenburg is not an emergency function and is only available for the nursing staff via the electrical function management.

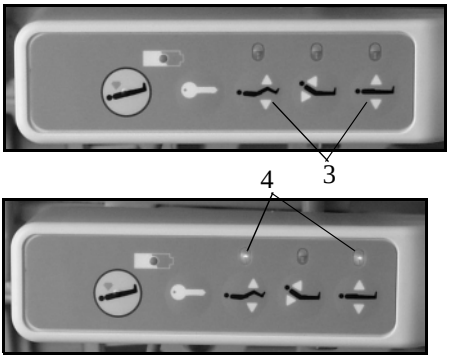
NOTE:
If the electrical function management is not manually deactivated, it locks itself after about one minute.

NOTE:
Do not fix a strap on the pedal or leave an object below it which could activate the management key, because if the management function remains activated permanently, the HiLow function is no longer available.

WARNING:
It is the responsibility of the nursing staff to authorize the patient to use certain bed functions, including the HiLow. Failure to do so could result in patient injury or equipment damage.

Locking out electrical functions

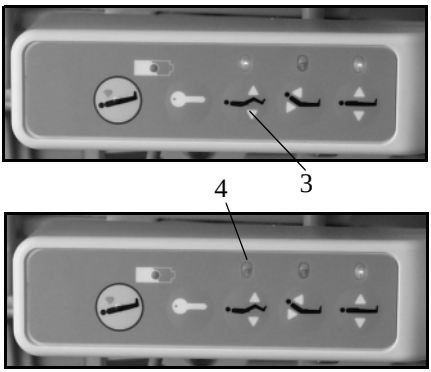
- Activate function management.
- Press the symbol representing the function to be locked out on the caregiver's side control panel.
- The indicator of the corresponding function will then be lit to indicate that the function is locked out (4).



- Deactivating function management.

Authorizing electrical functions

- Activating function management.
- Press the symbol representing the function to be authorized (3) on the caregiver's side control panel.
- The indicator of the relevant function will then switch off to indicate that the function is enabled (4).
- Deactivating function management.



NOTE:
Locking out the thigh section adjustment control will also lock out the automatic contour feature (See "Automatic Contour" page 4-22).

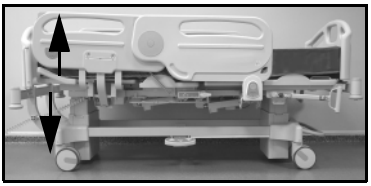
NOTE:
Locking out the head section does not lock out the thigh section adjustment of the automatic contour function.

⚠ WARNING:
When the patient is restrained by the straps*, the electric functions must be locked out. Failure to do so could result in patient injury or equipment damage.

Sleep Surface

Power-driven HiLow

Sleep surface height can be adjusted using the control pendant, the bilateral HiLow pedal, or the control unit on a flexible arm.

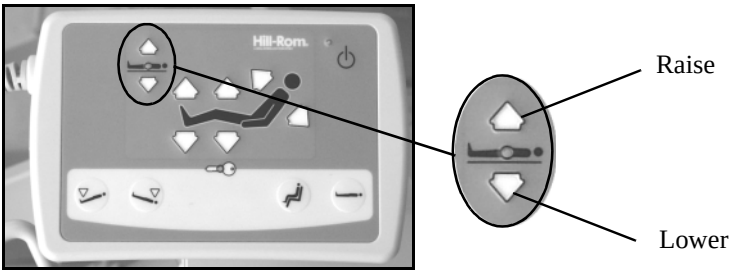


⚠ WARNING:
Before using this function, check that no obstacles (e.g., objects, accessories, power cables) or persons (especially children) are under the sleep surface.
Check that patient's limbs are within the sleep surface. Failure to do so could result in patient injury or equipment damage.

⚠ CAUTION:
Ensure that the bed and accessories (patient helper, I.V. pole, etc.) cannot strike any fittings (light fittings, headwalls, etc.) or hospital furniture (chair, bedside cabinet, etc.). Failure to do so could result in equipment damage.

NOTE:
Before using the HiLow function, check that it is enabled (See "Electrical function management" page 4-13).

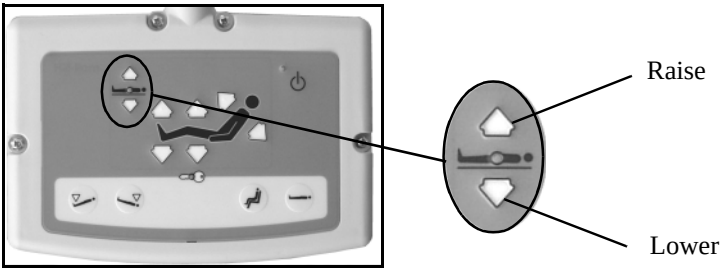
Control pendant*



To adjust the height of the sleep surface:

- Press the arrow of the symbol for the movement you require.
- Release when the required height is reached.

Control unit on a flexible arm*



To adjust the height of the sleep surface:

- Press the arrow of the symbol for the movement you require.
- Release when the required height is reached.

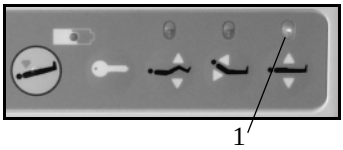
Bilateral HiLow pedal*

This pedal is located centrally under the lower bed frame on each side. By default, the pedal is locked to avoid accidental movement. It is necessary to unlock the HiLow pedal before each use.

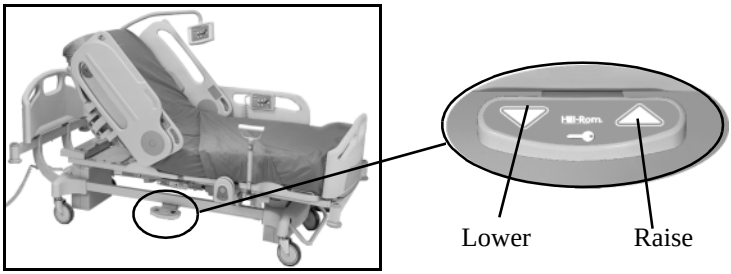
NOTE:
The HiLow lock out (1) on the side caregiver unit does not control the availability of the HiLow pedal.

To adjust the height of the sleep surface:

- Activate function management (See “Activating/deactivating function management” page 4-14).
- Press your foot on the corresponding control arrow for the movement you require.

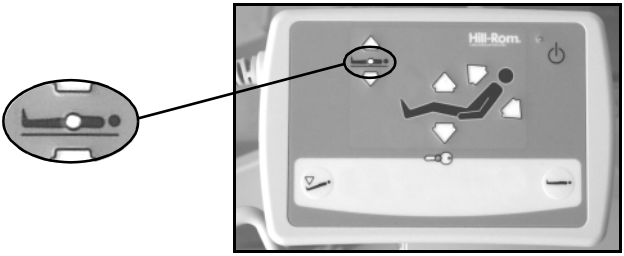


- Release when the required height is reached.
- Deactivate function management to lock the HiLow pedal.



Low bed position indicator

An indicator located on the control pendant and on the control unit on the flexible arm switches off to indicate that the bed is in low position. This position is recommended when the patient is left unattended.



⚠ WARNING:
When raising the bed, make sure that there is enough room above the IV pole, if necessary. Failure to do so could result in patient injury or equipment damage.

Trendelenburg/Reverse Trendelenburg

⚠ WARNING:
Before enabling this function, check that the frame extension is securely locked in one of the notches and that no obstacles (e.g., (e.g. objects, accessories, power cables, tubes) or persons (especially children) are under the sleep surface.
Check that patient's limbs are within the sleep surface. Failure to do so could result in patient injury or equipment damage.

⚠ WARNING:
Never leave the patient unattended in the Trendelenburg/Reverse Trendelenburg position (See "Trendelenburg/Reverse Trendelenburg and Emergency Trendelenburg" page 8-1).

NOTE:
The Trendelenburg/Reverse Trendelenburg is not an emergency function and is only available for the nursing staff via the electrical function management(See "Electrical function management" page 4-13).

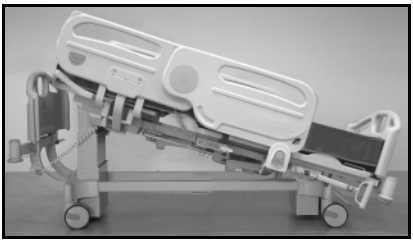
The sleep surface may be inclined in two ways: in Trendelenburg (head end in low position) or Reverse Trendelenburg (foot end in low position).

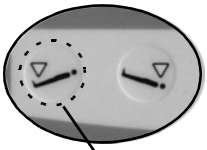
The maximum angle for the Trendelenburg/Reverse Trendelenburg is available at all heights of the sleep surface. The angle is shown on the indicator located on the foot siderail support.

To tilt the sleep surface :

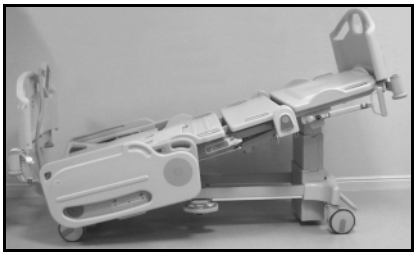
- Activate the function management (See "Activating/deactivating function management" page 4-14).
- Press the button corresponding to the function required on the control pendant or control unit on a flexible arm.
- Release the button when the required angle is attained.
- Deactivate the function management (See "Activating/deactivating function management" page 4-14).

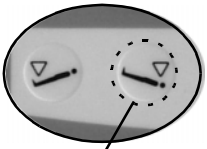
NOTE:
After one minute, the management function is deactivated automatically.





Trendelenbug

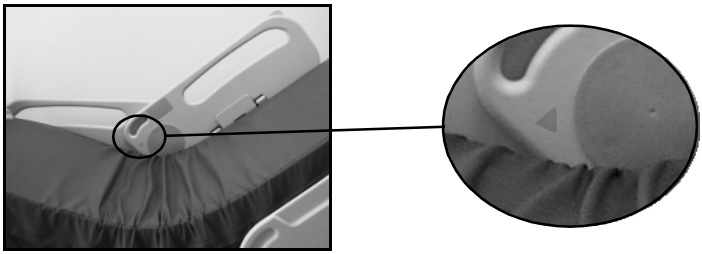




Reverse
Trendelenbug

Reference mark for positioning the patient

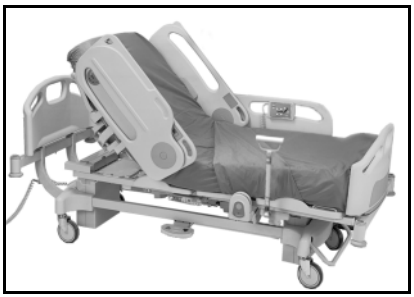
Position the patient's hip opposite the mark on the inner surface of the TotalGuard™* siderail to make sure that the patient is in an optimal and comfortable position on the bed.



Head section

WARNING:

Ensure that there are no obstacles (patient's limb, power cable, objects, and accessories) before using the head section features. Failure to do so could result in patient injury or material damage.



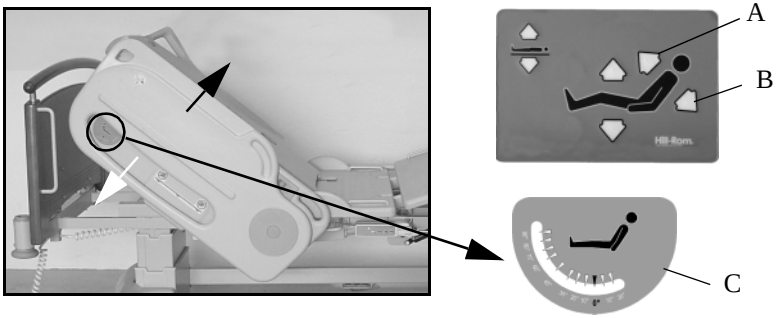
Head section control

Head section adjustment can be activated from the control pendant or the control unit on a flexible arm.

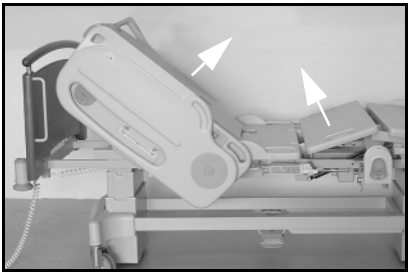
- Press the head section raise button (A) to raise the head section with the automatic contour feature (if enabled).
- Release the button when the required angle is attained.

The head section is lowered using button (B).

The angle between the head section and the horizontal can be seen on the indicator (C) located on the head siderail.



Automatic Contour



The automatic contour feature (automatic comfort level positioning) can be activated using the control pendant or the control unit on a flexible arm.

The automatic contour feature raises the head section and the adjustable thigh section simultaneously and helps to prevent the patient from sliding down in the bed.

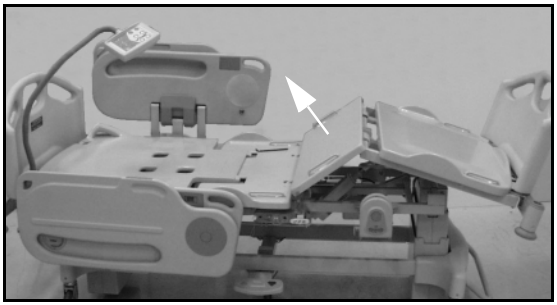
The automatic contour feature is only available when both the head section and thigh section functions are enabled.

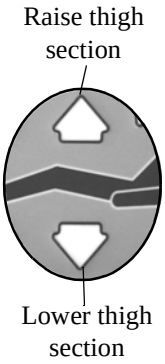
NOTE:
When the head section is locked out, the adjustable thigh section can still be activated by the control pendant or the control unit on a flexible arm.

Thigh Section

Electric thigh section control

Thigh section elevation can be adjusted by using the control pendant or the control unit on a flexible arm.





When the thigh section is raised, the foot section is inclined at an angle of approximately 14° from the sleep surface (See “Foot section” page 4-23).

Foot section

Electric foot section*

The foot section of the bed can be electrically raised by using the control pendant or the control unit on a flexible arm.

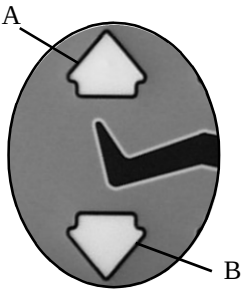
NOTE:
The angular range that the foot section can be adjusted to depends on the angle to which the thigh section is adjusted.

To raise the foot section:

- Press the raise foot section button (A) until the required angle is reached, then release.

To lower the foot section:

- Press the lower foot section button (B) until the required angle is reached, then release.



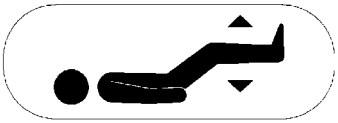
Manual foot section adjustment*

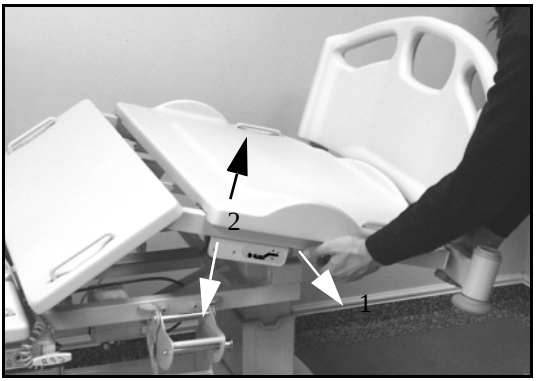
The foot section has a gas-assisted locking system that can be manually adjusted.

NOTE:
The angular range that the foot section can be adjusted to depends on the angle to which the thigh section is adjusted.

To incline the foot section:

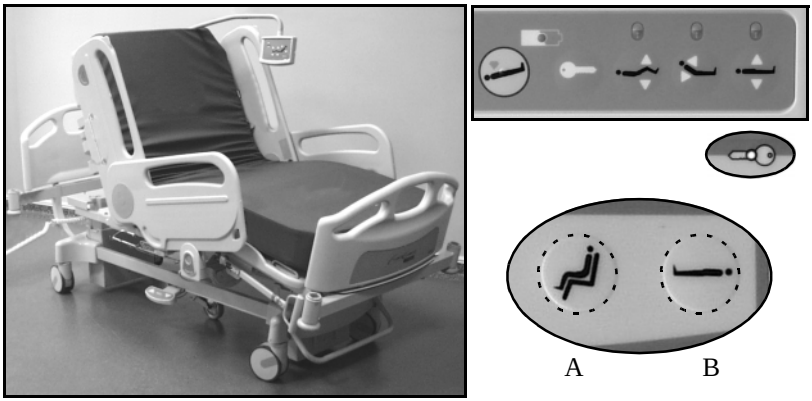
- Use the pull-out handle on the end of the foot section to raise it to the required position (1).
- Raise or lower the foot section to the required position (2).
- Release the handle.





Automatic EasyChair®*

The EasyChair® automatic chair position allows the patient to be progressively mobilized, without the need for transfer from the bed. This function is only available to the caregiver.



Adjusting to the chair position:

- Activate the function management (See “Activating/deactivating function management” page 4-14).
- Press the EasyChair® automatic chair position button (A) until the chair position is reached. The movement stops automatically.

To return to the normal position:

- Press the return to flat sleep surface button (B) until the normal position is reached. The movement stops automatically.
- Deactivating function management.

NOTE:
The bed can be adjusted to the chair position from any sleep surface height.

NOTE:
The locking out of one sleep surface function will automatically disable the EasyChair® Automatic Chair Position function.

NOTE:
If the EasyChair® Automatic Chair Position is enabled, all the electric movement functions are then automatically enabled.

Emergency functions

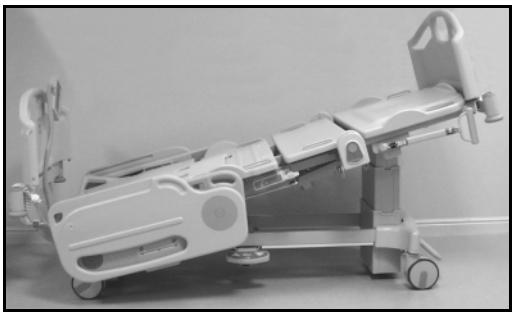
Emergency Trendelenburg*

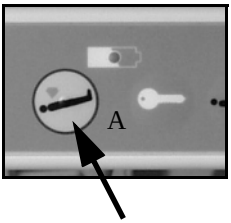
This feature automatically and simultaneously lowers all the articulated sections until they are horizontal, then inclines the sleep surface to an angle of 0° to 16°.

⚠ WARNING:
Before setting in the “Shock” position, it is imperative to lower the siderails.

⚠ CAUTION:
Ensure that any accessories or devices cannot fall as a result of the frame movement. Failure to do so could result in equipment damage.

⚠ WARNING:
Never allow an unqualified person or unattended patients to use this function in this position. Failure to do so could result in equipment damage or injury.
Before using this function, check that no obstacles (e.g., objects, accessories, power cables) or persons are under the sleep surface.





To enable the “Shock” feature:

- On the lateral caregiver unit, push and hold the symbol (A) until the desired angle is achieved then release.

The bed is then in the “Shock” position.

NOTE:
When there is no mains power supply, this feature is available through an emergency Trendelenburg battery.

CPR

WARNING:

Never allow a non-qualified person to operate this function and check that no obstacles (e.g., objects, accessories, power cables) or persons are under the head section.

When activated, the CPR release (resuscitation, heart massage, etc.) uncouples the head section actuator to allow the head section to lower to horizontal from any position. The CPR release function is gas-assisted to cushion the movement and can be used when electric power is not available.

It is operated by a handle located centrally and bilaterally under the sleep surface.

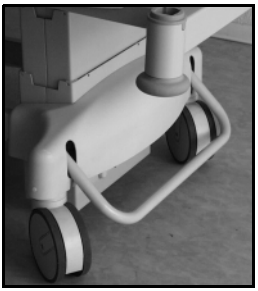
Returning the head section to the flat position:

- Pull the yellow CPR handle out, hold and push the head section down with the other hand.
- Let the head section come to rest or steady and assist the head section to the flat position.
- Release the handle when the head section is flat.

The head section actuator is automatically re-enabled after the yellow CPR handle is released.

Brake and steer system

Using the brake and steer bar



⚠ WARNING:
Always put on the brakes when the bed is occupied, except during patient transport. To make sure the bed will not move, push and pull on the bed to check it after the brakes are engaged.

The brake and steer bar, located at the foot of the bed on the chassis cover, controls all four casters.

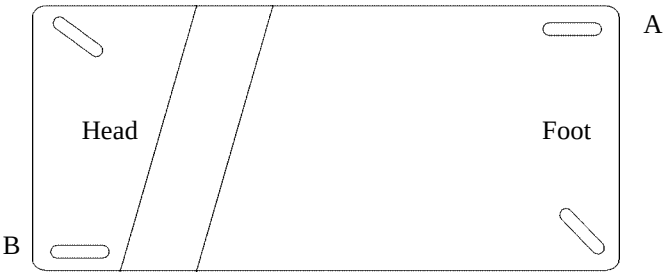
"BRAKE" position (bar down):
the bed cannot be moved.

"NEUTRAL" position (bar horizontal):
all four casters can turn and swivel.
The bed can be turned in any direction.

"STEER" position (bar up):

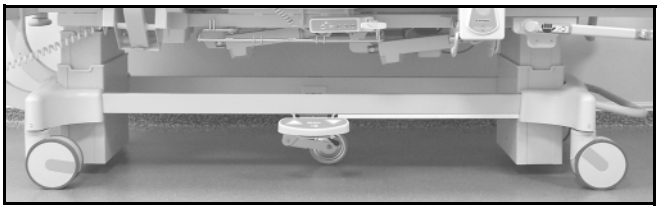
Using the bar in the steering position

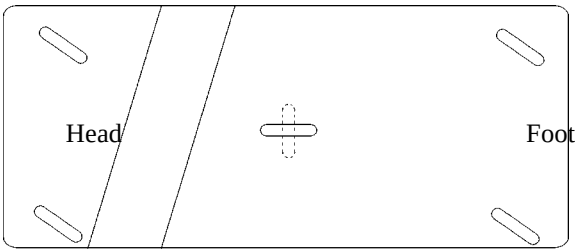
- **without 5th wheel** (basic version):
  The casters turn and only the caster A or B (foot end steering caster) can be steered and does not swivel.
  The bed can be moved in a straight line.



- **with self-steering 5th wheel** (*):

NOTE:
When the bed is fitted with a self-steering 5th wheel, the steer position on the brake and steer bar is not available.
The 5th wheel automatically changes to the steering position when the bed is moving in a straight line, forwards or backwards, or sideways (90° to the left or right) and is released the next time the bed is moved.Incompatible with 125 mm diameter casters

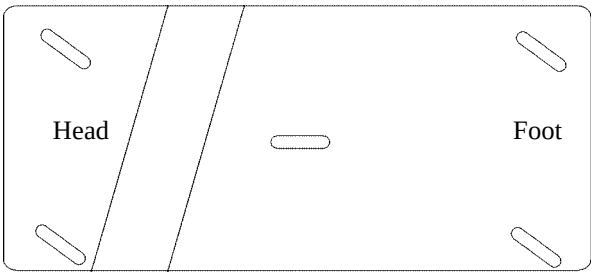




NOTE:
Incompatible with 125 mm diameter casters

- **with controlled 5th wheel** *:

When the bed is fitted with a controlled 5th wheel, the steer position on the brake and steer bar remains available.
When the brake and steer bar is in the steering position, the 5th wheel automatically switches to the steering position as soon as the bed moves forwards or backwards.
The wheel is released when the brake and steer bar is returned to the "NEUTRAL" position.



NOTE:
Incompatible with 125 mm diameter casters
Before moving the bed sideways, check that the brake and steer bar is in the "NEUTRAL" position.

Bed Connected to AC Power, Brake not Applied Detection*

When the bed is plugged into AC power and the brakes are not set, an alarm sounds until the brakes are set or AC power is removed.

Moving the bed

WARNING:
Failure to perform any of the checks below could result in injury or equipment damage. Before moving the bed, perform the following checks:

- If there is a patient in the bed, ensure that the siderails are raised and locked to help prevent the patient from falling.
- Position the sleep surface so the footboard handles are at the most suitable height for transporting the bed (approximately ½ Hi-Low) and with the foot section horizontal.
- Disconnect the general power cable and the power cable of the electric accessories (e.g., air mattress, etc.) and hook them to the bed as described in paragraph “Securing the power cable” page 4 - 32.
- Ensure that the bed or accessories (patient helper, etc.) will not catch on doorways or other obstacles (e.g. lights).
- Place the control pendant on the inside of the head siderail to prevent any damage to the control pendant or cable (e.g., catching on doorways, etc.).
- Place the patient in a stable and comfortable position (do not put the bed in the chair position or with a fully raised head section).

CAUTION:
Never try to move the bed by pulling on the power cable or you may damage it.

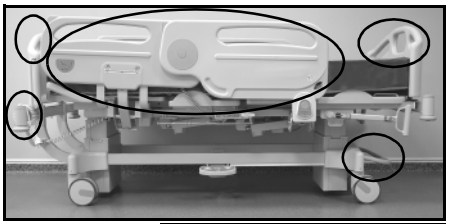
SHOCK HAZARD:
A damaged power cable is an electric shock hazard.

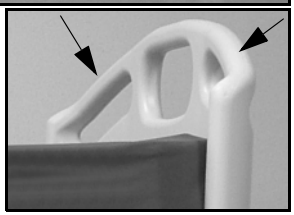
WARNING:
Applicable for beds manufactured with variable width siderails and headboard bars.

WARNING:
The bed must be moved while in transport position by 2 people (one at each end in order to have always one person to action the brake bar) when moving the bed on a slope, with a foot end steer caster or when moving the bed with a heavy load (heavy patient, accessories fitted, etc.).

Moving the bed:

- Grip the headboard or frame with both hands.
- Raise the brake and steer bar to the “NEUTRAL” position to unlock the brakes.
- Push the bed, steering with the headboard.





For easy transportation in a straight line:

- Push the bed using the end board opposite the steering wheel (See “Using the brake and steer bar” page 4-28).
- After having moved the bed for a short distance to align the casters, raise the brake and steer bar to the “STEER” position.

Securing the power cable

CAUTION:
Do not store the power cable in the holes in the headboard. Doing so may result in entanglement problems with the headboard while removing the headboard during emergency CPR.

SHOCK HAZARD:
A damaged power cable is an electric shock hazard.

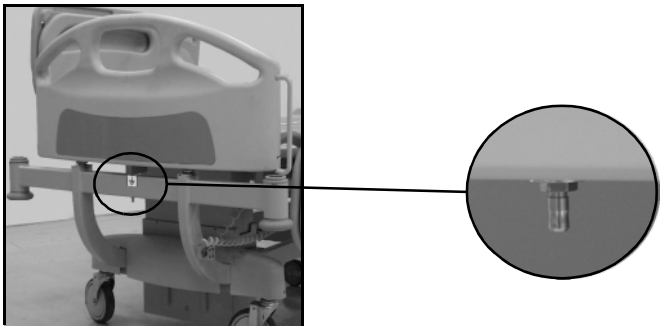
Prior to transport, properly stow the power cord to prevent tripping. Take care to prevent damage to the power cable. An electric shock hazard exists.

Equipotential terminal

SHOCK HAZARD:
Failure to connect the equipotential cable may result in corporal injury.

When direct intravascular or intracardiac connections are in use, the electric potentials of all the unprotected metal parts need to be equalized.

The bed must be connected to the electrical installation.
To equalize potentials if a grounded power connection is unavailable, connect the equipotential cable (AC968A) to the connection terminal on the bed and the device.



Handling the headboard and footboard

WARNING:
The headboard bars are not intended to receive accessories, accessory support device or any means of immobilizing the patient (e.g.: straps). Failure to do so could result in patient injury or equipment damage.

Polypropylene headboards and footboards*

WARNING:
Do not invert the headboard and footboard. Failure to do so could result in patient injury or equipment damage.

The headboard and footboard are provided with a label which helps to differentiate the headboard from the footboard see photos on next page).

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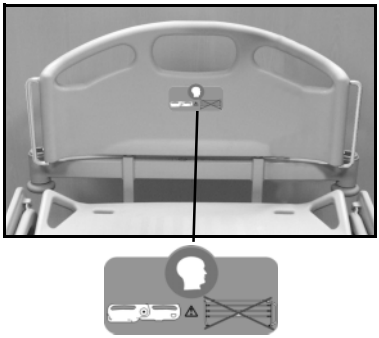
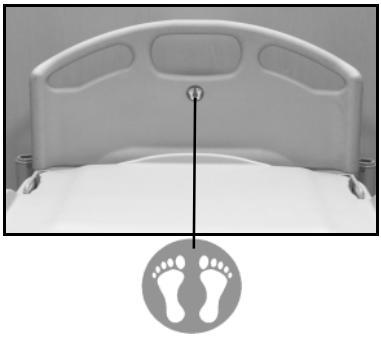
Polypropylene headboard



Polypropylene footboard

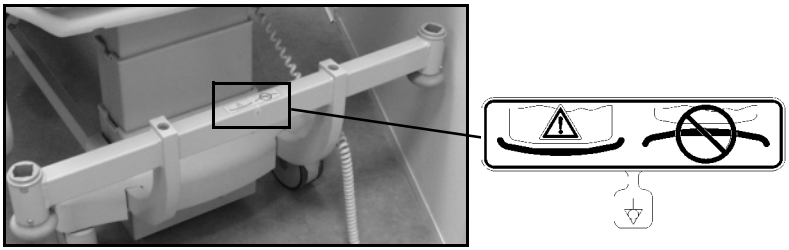


WARNING:

Incorrectly installing the headboard in the bed frame may increase the risk of becoming trapped. Failure to follow these recommendations may lead to material damage or injury.

NOTE:

Position the headboard as shown on the label on the head end cross bar of the bed and the illustration above.



Standard headboard and footboard*

No special tools or devices are required to remove and replace the standard headboard or footboard.

To position a standard endboard:

- Hold the endboard by both handles.
- Place the studs in the holes in the head or foot of the bed.

To remove a standard endboard:

- Hold the footboard by the handles on either side and pull upwards.

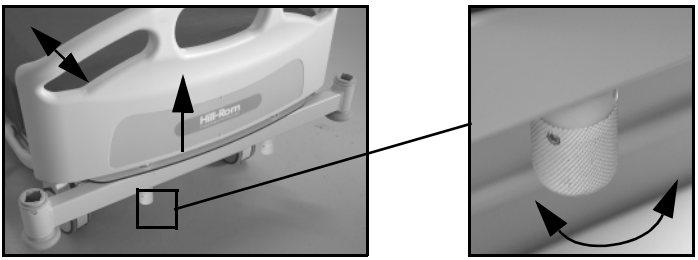
Lockable Footboard*

The footboard can be fixed to the bed frame with a manual locking system and can be dismount for cleaning.

WARNING:
Regularly check that the footboard is correctly fixed.

To fix the footboard:

- Hold the endboard by the handles and place the studs in the holes in foot of the bed.
- Tighten and lock the two knobs.
- Ensure that the footboard is correctly fixed by lifting, pulling or pushing it.



To remove an endboard:

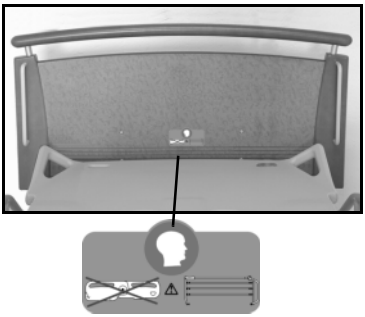
- Loosen and unscrew the two knobs.
- Hold the footboard by the handles on either side and pull upwards.

Wooden endboards*

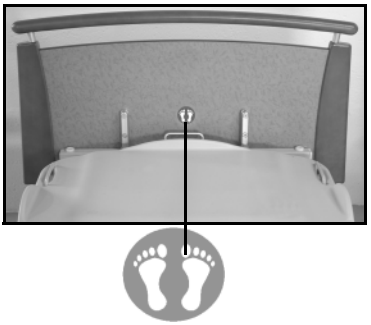
No special tools or devices are required to remove and replace the wooden headboard or footboard.

The headboard is equipped with bars.

Wooden headboard

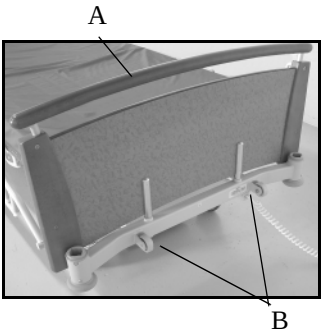


Wooden footboard



To position the endboard:

- Hold the headboard or the footboard by the handle and orientate it as shown on the pictures above.
- Place the studs (B) in the holes in the head or foot of the bed.



To remove an endboard:

- Hold the headboard by the handle (A) with both hands and pull upwards.

Sleep surface

WARNING:

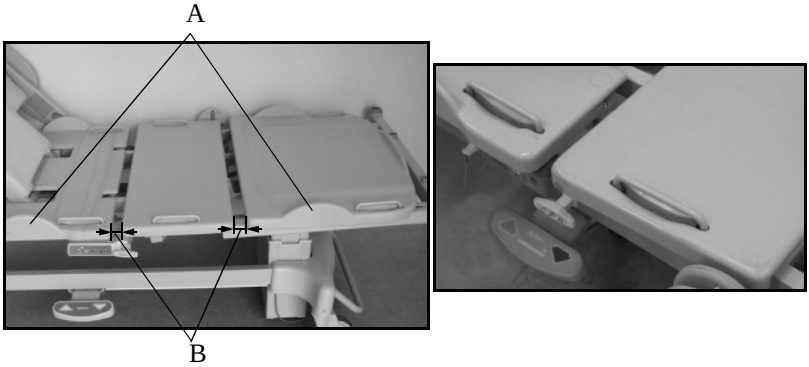
Ensure that hard surfaces are properly positioned and secured after fitting. Failure to do so could result in patient injury or equipment damage.

The sleep surface is composed of 4 sections with hard surfaces. Three of them can be removed for easy cleaning. The head section hard surface is fixed.

To remove the thigh and foot hard surfaces, simply lift them up.

To raise the central hard surface, first fully raise the head section (See “Head section control” page 4-21). Then raise the central hard surface by pulling on the bars and turning. Then slide towards the rear.

Sections are positioned using the handles. Ensure that the smooth part is placed downwards and the raised lip (A) upwards. Ensure that there are spaces (B) as indicated below.



Restraining strap handles[1]

WARNING:

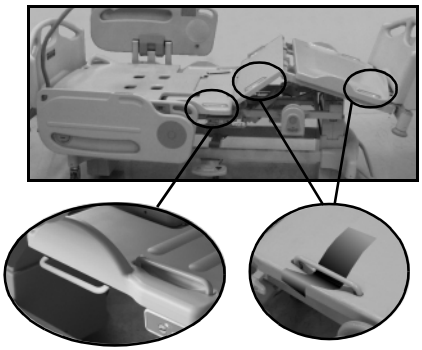
Do not attach the restraining straps to any part of the bed (particularly the siderails) other than those provided for this purpose.
When the patient is restrained by straps, all electric functions should be locked out. When the patient is restrained with an abdominal strap, a system used to restrict the ankles must also be used. Failure to do so could result in patient injury or equipment damage.

1. Only to be used in compliance with local regulations

When required, patient-restraining straps must be tied to the proper handles provided.

The sleep surface has four handle positions (seat, thigh and foot section) located on each side of the bed.

Thread the straps through the bars.



⚠ WARNING:
Containment devices must not be used as a replacement for the nursing care required by the patient. Even when they are correctly installed, physical containment devices may become tangled and injure the patient or even cause death if the patient is agitated and confused. Whenever containment devices are used, the patient must be observed in accordance with legal requirements and protocol. Failure to do so could result in patient injury or equipment damage.

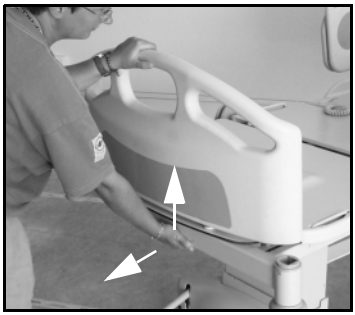
⚠ WARNING:
Containment devices must be secured to the articulated sections of the bed using appropriate attachment points in order to avoid injury to the patient.

⚠ WARNING:
Never use containment straps for the ankles when the bed is in the seated position or the foot section is lowered. Failure to do so could result in patient injury or equipment damage.

Foot End Bed Extension*

CAUTION:
Ensure that the bed extension is correctly secured when storing or extending it by pulling or pushing. Failure to do so could result in equipment damage.

Foot end bed extension with polypropylene endboard*



To pull out the extension:

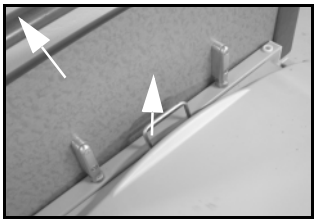
- Lift the handle located under the footboard.
- Pull out the extension.

Two positions are provided:

- Stored and extended. The extension is securely held in position by notches.

To store the extension, follow the same process but push the extension in.

Extension with wooden endboard*



To pull out the extension:

- Lift the handle located at the foot end of the sleep surface on the inside of the footboard.
- Pull out the extension.

Two positions are provided:

- Stored or extended. Each position is secured in a notch.

To store the extension, follow the same process but push the extension in.

Linen holder*

WARNING:
Do not sit on the linen holder or use it as a step. Failure to do so could result in patient injury or equipment damage.

The bed features a linen holder that is built into the foot end.

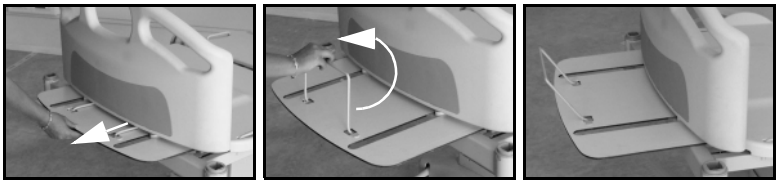
Safe working load: 33.07 lb[1]

Linen holder with plastic endboard*

To use the linen holder:

- Lift and pull on the board located under the footboard.
- Tip the wire guard backwards.

To store, reverse the steps above.

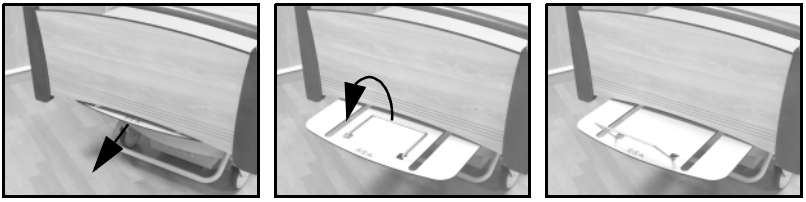


Linen holder with wooden endboard*

To use the linen holder:

- Pull on the board located under the footboard.
- Tip the wire guard backwards.

To store, reverse the steps above.

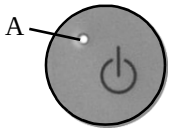


1. Safe working load specification allowing for a substantial safety margin.

Battery backup*

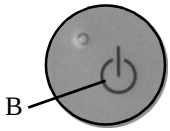
Power indicator

A power indicator (A), on the control pendant or the control unit on a flexible arm, indicates when it is ON that the bed is under power (battery or main). It switches OFF when the bed is unplugged or in sleep mode.



Battery power activation

Before using the battery, the switch (B) must be enabled on the control pendant or the control unit on a flexible arm. All electrical functions are then available in their initial locked state.



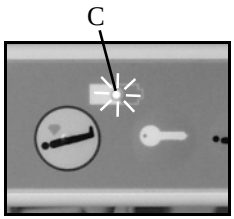
NOTE:
Battery power automatically cuts out about one minute after the last movement.

When the battery charge level is low and an electrical function is activated, an alarm will sound indicating that the battery needs re-charging. The ongoing movement will be completed.
The bed must then be connected to a mains power supply to re-charge the battery. The electric functions can then be used normally.

Battery recharge

WARNING:
The bed must be connected to the mains power supply until the charge indicator goes out. Charging time is approximately 10 hours. Failure to do so could result in the inability to operate the bed when power is unavailable.

If the indicator (C) is flashing, it indicates a low battery, and is charging. If the charge indicator (B) is on and not flashing, then the battery is fully charged. When the bed is disconnected from the mains power supply or when the battery is completely dead, this indicator light goes off.



INSTRUCTIONS FOR USE

MobiBar® egress handle*

A MobiBar® egress handle is located on each side of the bed. It enables mobile patients to get in and out of the bed with greater ease and in safety.

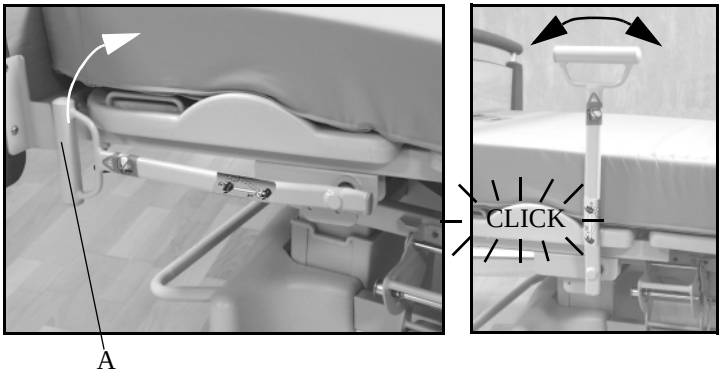
WARNING:

Before use, it is necessary to store the TotalGuard™* foot siderail support under the sleep surface (See “Storing the foot siderails (Position 2)” page 4-5).

Never put or leave the MobiBar® egress handle in the raised position when the TotalGuard™* foot siderail is unfolded and/or locked. Fingers or body members may become trapped.

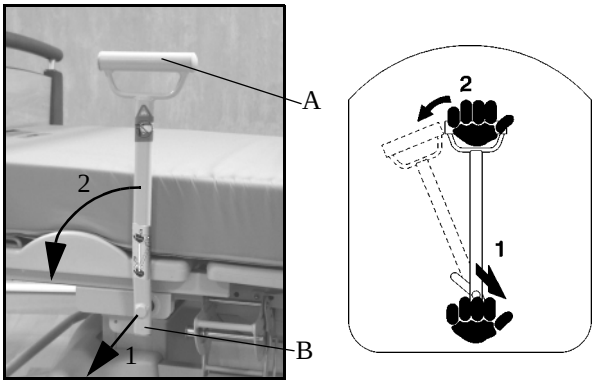
Usage

- Grip the egress bar by the handle (A).
- Rotate the egress bar toward the head of bed until a click is heard.
- Ensure the locking mechanism is secure by pulling on the handle.



Storage

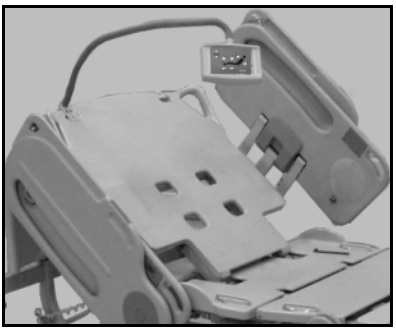
- Grip the egress bar by handle (A) with one hand.
- Pull, by the low part (B), the egress handle (1) outwards with the other hand.
- While continuing to pull, rotate the egress handle (2) toward the foot of the bed and under the sleep surface, then release.



Control unit on a flexible arm*

⚠ WARNING:
When the bed features an I.V. pole, the flexible arm must be fitted on the opposite side of the bed to prevent any risk of catching it when the head section is raised. Failure to do so could result in patient injury or equipment damage.

This unit can be placed to the left or right of the head section, as required.

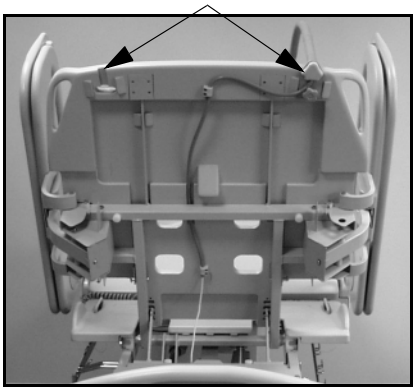


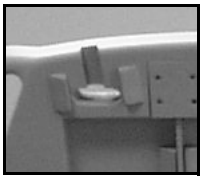
Change of position

WARNING:
Two people are required for this operation and the bed must not be occupied. Failure to do so could result in patient injury or equipment damage.

To change the position of the flexible arm:

- Raise the head section to its maximum height.
- As one person holds the arm, the other person turns the beige knob with one hand, while holding the captive nut with the other hand.
- Set the arm in the other position.
- Insert the screw in the oblong orifice and fully tighten the beige knob.
- Check the positioning by pulling on the arm.



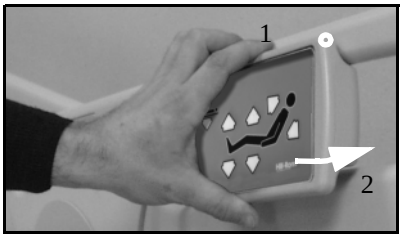


Control Pendant*

Installation

Fit the control pendant in the open part of the TotalGuard™* siderail or between the two upper bars of the metal siderail by inserting the top edge first (1).

Turn (2) the control pendant until you hear a click.



Positioning

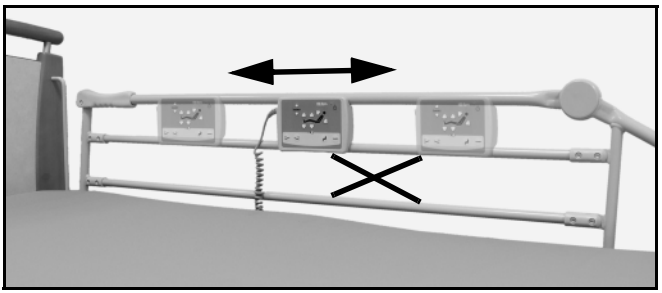
CAUTION:

Make sure that the control pendant is inside the head section when folding away the TotalGuard™* siderail (See “Storing the foot siderails (Position 2)” page 4-5) or is removed when folding away the metal bar (See “Lowering the long metal siderails (position 1)” page 4-9). If it is on the outside, it may damage the control wire of the siderail.

WARNING:

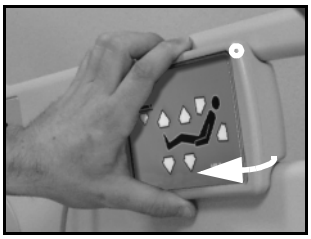
Do not clip the control pendant on the side opposite to its connection.

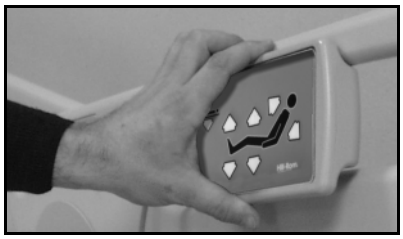
The control pendant can be fitted to the siderails in several places and facing the inside or outside of the bed for greater comfort for the patient and the caregivers.



Unclipping

To unclip the control pendant, reverse the installation procedure described in the section "Installation" page 4 - 44.





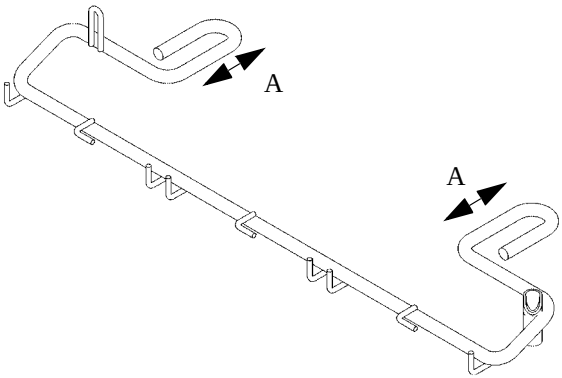
Connecting the control pendant

The control pendant can be connected to the right or left of the patient, except if an accessory control unit a flexible arm is fitted on the bed.

Accessory support bar*

WARNING:
Ensure that any accessories fixed to the accessory support bar will not obstruct the base frame and the HiLow pedal.

This accessory is mounted on the side of the bed and can be adjusted laterally (A) by pushing or pulling the accessory support bar.



This bar allows various devices (drainage bag, etc.) as well as some other Hill-Rom accessories to be supported Hill-Rom, (See "Accessory holder" page 6-15).

Medical device support rail*

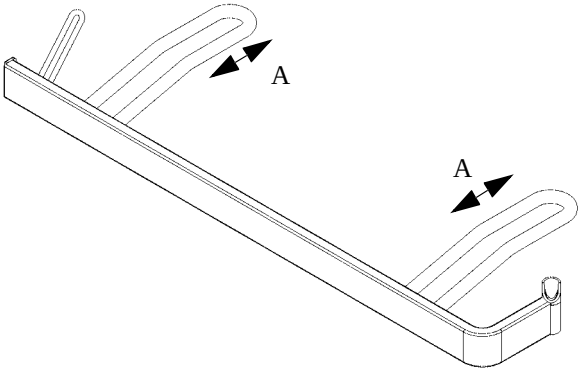
WARNING:

Ensure that there can be no obstruction with the base frame and HiLow pedal.

As a reminder, any user who attaches a medical device to the support must ensure that the resulting combination and/or system is compatible.

For any powered medical device, compliance with electrical safety regulations must be checked by qualified personnel.

This accessory is mounted on the side of the bed and can be adjusted laterally (A) by pushing or pulling the accessory support bar.



The rail is used to carry various medical appliances and other accessories Hill-Rom, (See “Accessory holder” page 6-15).

NOTES:

Chapter 5
Cleaning, maintenance, and spare parts

Cleaning

WARNING:

Follow the cleaning product manufacturer's instructions. Failure to do so could result in patient injury or equipment damage.

SHOCK HAZARD:

Unplug the bed from the mains power supply. Patient injury or equipment damage could result.

SHOCK HAZARD:

Do not expose the bed to excessive moisture that would allow for liquid pooling. Patient injury or equipment damage could result.

CAUTION:

Do not use harsh cleaners or detergents such as scouring pads and heavy duty grease removers or solvents such as toluene, xylene or acetone. Equipment damage could occur with an impact on user safety.

General Cleaning

Clean the bed with a lightly dampened cloth and ordinary disinfectant. Do not use excessive liquid.

The bed has been designed for easy cleaning and optimized disinfecting.

Safety Recommendations

1. Ensure that the bed cannot move.
2. Set the bed to the high position.
3. Lock out all electrical functions.
4. Disconnect the bed and stow the power cable (see "Securing the power cable" page 4-32).

5. Ensure that all connections on the control units are firmly in place (control pendant and control unit on a flexible arm on the lateral caregiver unit).
6. Never pour water on the bed, use a high-pressure hose, or wash in a tunnel wash.
7. Never use water at a temperature of over 60°C (140°F).
8. Avoid getting excess water on connecting plugs, lateral caregiver units, control units, on the siderail supports and on the mattress.
9. Thoroughly dry the bed before reusing it.

Failure to implement one or more of these recommendations may lead to damage or deterioration, preventing use of the bed and rendering the warranty void.

General Advice

NOTE:
Staining disinfectant products such as methylene blue or eosine must be removed rapidly to avoid permanent staining.

NOTE:
A list of recommended cleaning products for all types of cleaning requirements is available on your request along with a special maintenance advice leaflet.

Avoid excessive temperature differences between the water and the actuators.

- Bed and accessories: See “Recommended Cleaning and Disinfection Method” page 5-3.
- Polypropylene parts: See “Recommended Cleaning and Disinfection Method” page 5-3.
- After removing the hard surfaces and moving them away from the bed, they can be washed in running hot water.
- Endboards and siderails: See “Recommended Cleaning and Disinfection Method” page 5-3.

The following products should not be used: chlorine, formaldehyde, or phenol-based products and solvents of any kind. Never use abrasives, cleaning powder or cleaning pads that may damage components.

Steam Cleaning

⚠ CAUTION:

Do not use any steam cleaning device on the bed. Excessive moisture can damage mechanisms in this bed.

Cleaning tough stains

To remove tough stains, use standard household cleaners and a soft bristle brush. To loosen heavy, dried-on soil or excreta, you may first need to saturate the spot.

Disinfecting

Dilute disinfectants and germicides as specified on the manufacturer's label.

The following recommendations are not designed to replace existing cleaning protocols drawn up by the hygiene officer or by other bodies for your hospital.

The disinfecting method described below applies specifically to the bed and its accessories and is designed to save time and to help combat nosocomial infection more effectively.

Recommended Materials and Products

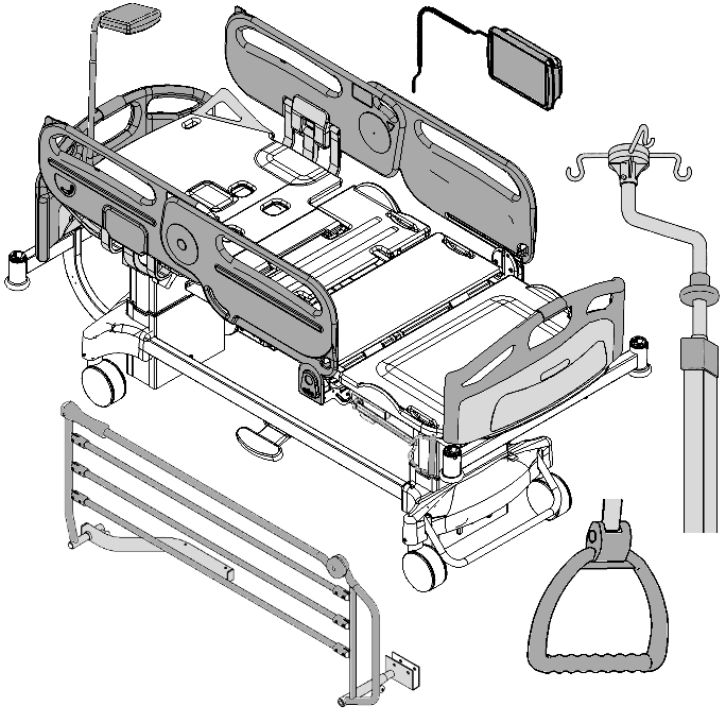
- Several single-use tissues or recyclable textile wipers.
- One pair of household gloves.
- Detergent-disinfectant solution diluted according to hospital guidelines (and taking into account the recommendations given above) or a disinfecting spray.
- Use a standard product that complies with AFNOR standards. NF T 72-101 (bactericide including TB, fungi and viruses, including HIV-1 and HBV-).

Recommended Cleaning and Disinfection Method

- Always wipe downward, working from the cleanest to the dirtiest areas.
- Do not scrape surfaces. Keep wipes damp (wet as many times as needed and do not wring out too much water).

- Let product dry according to disinfectant manufacturer's recommendations to ensure maximum efficiency.
- Rinse if necessary: follow the recommendations of the disinfectant supplier.
- Change wipes when cleaning the least contaminated areas to areas of medium or to highly contaminated areas.
- Change wipes when cleaning another bed.
- Always dry the bed thoroughly after it has been cleaned.

Recommended Cleaning and Disinfection



Clean and disinfect every day

Clean and disinfect after patient departure

Clean and disinfect thoroughly (after the departure of the infected patient or according to the facility's disinfection protocol)

Disinfection Record

A disinfection record should be kept for each bed, mentioning:

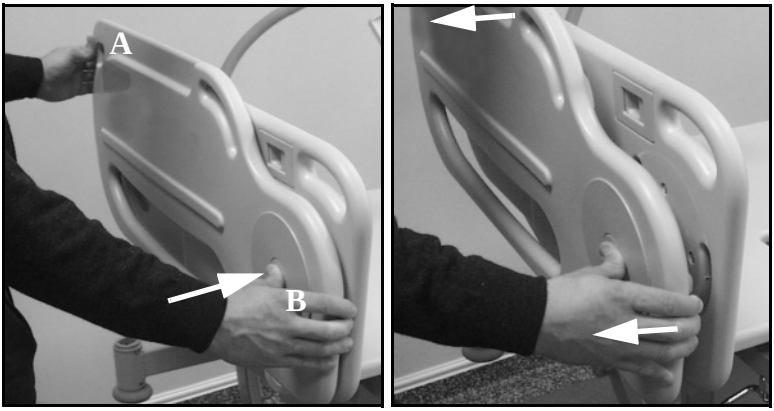
- Date (month, year), ward and room number, bed reference number.
- Cleaning frequency, materials and products used.

Removal of the Foot TotalGuard™ Siderail

NOTE:
The foot part of the siderail is removable in order to permit thorough disinfection.

NOTE:
The foot siderail should only be dismantled when the siderail is in the folded position (see “Storing the foot siderails (Position 2)” page 4-5).

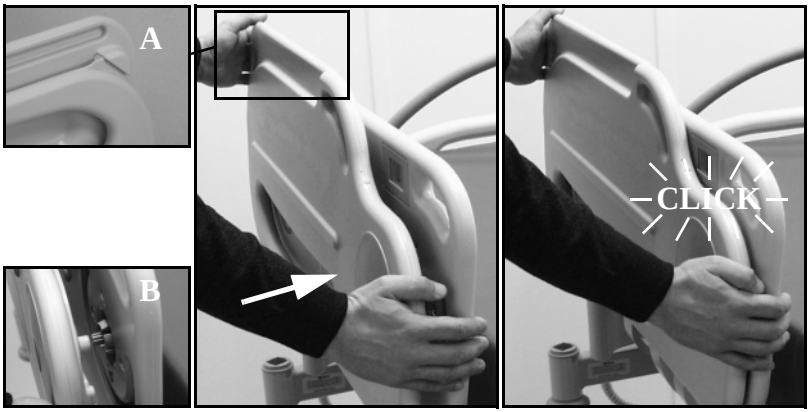
- Grip the foot siderail as follows. With one hand on the positioning lug at the head end (A) and the other near the button (B) as shown on the photo below.
- Push on the unlocking button and pull the foot siderail.



You can then proceed to clean all surfaces of the head and foot siderails.

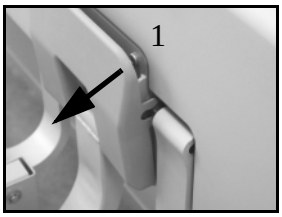
Foot Siderail Assembly

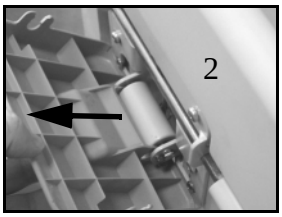
- Place the foot end of the foot siderail on the positioning lug of the head siderail (A).
- Align the foot siderail in front of the head siderail socket (B) and push until an audible click is heard.
- Verify that the foot siderail is well seated by testing its operation (see “Unfolding the foot siderails (position 3)” page 4-4).



Removal of the interior siderail cover

- Pull (1) outwards on the siderail cover and rotate it.
- Pull (2) the siderail cover upwards.

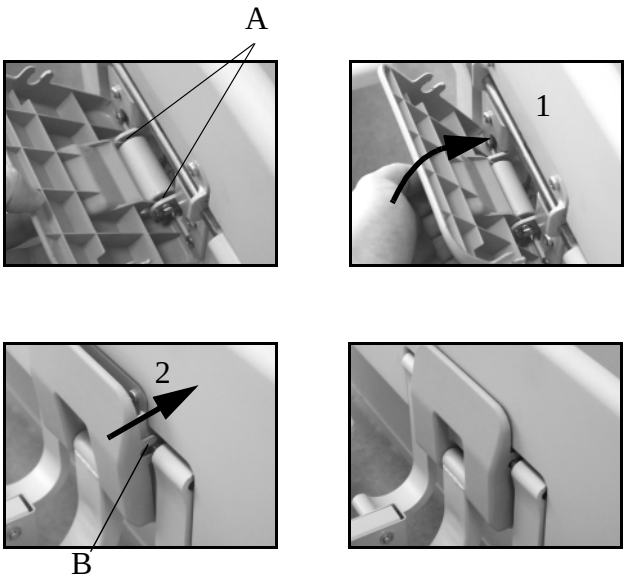




- The siderail and siderail cover can now be cleaned.

Installation of the cover

- Place the small wings of the cover in the spaces (A).
- Rotate (1) the cover around the pivot.
- Place the clips on the pivot (B) and push (2) to bottom until it locks in place.



Maintenance

Safety Recommendations

⚠ WARNING:

Only facility-authorized personnel should perform maintenance. Failure to observe this precaution could result in patient injury or equipment damage.

Before any maintenance or repair work, carry out the following operations in the order presented:

- Lock out all electric functions (see “Locking out electrical functions” page 4-15).
- Unplug the bed from the mains power supply.
- Ensure that the bed cannot move.
- Secure the frame and ensure that all movements are locked.

Never open, heat, or pierce an electrical actuator or gas actuator (high-pressure cylinder).

Contact our after sales service for any specific maintenance problem (leaks, blockages, etc.).

If the bed is fitted with a battery:

- Never open, burn, or immerse a worn out battery. See “De-commissioning” page 8-8.
- A new battery should only be installed by facility-authorized personnel.
- Never leave the covers open.

Preventive Maintenance

NOTE:
Maintenance visit frequency should be determined according to the condition of the bed and specific usage, as some components may need changing after a given period of use (see Service Manual).

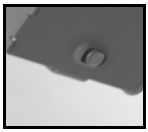
The bed should be inspected at least once a year to keep it in good condition and working properly. More frequent inspections may be necessary, depending on the use made of the bed.

If the bed is in storage, and it is equipped with a battery, it must be charged every 3 months to prevent failure of the battery.

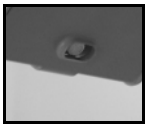
The following points should be given particular attention:

- braking system and wheels
- Siderail locking mechanisms and foot siderail supports
- Drive systems (especially actuators, etc.), electrical function management and lockouts (head and thigh sections, Trendelenburg/ReverseTrendelenburg), and their accessories
- CPR release and emergency functions (cables and handles)
- bed movement and ancillary part bearings
- brake/steer bar operation (in particular, return to neutral)
- the condition of cables and electrical components (in particular, power cable)
- correct earthing of the bed's metal parts and equipotential connectors
- waterproofing of electrical connections (tears, damage)
- cable ways
- good condition of the frame and welded assemblies (corrosion and shocks)
- The locking system of the siderail
- The locking system of the TotalGuard™ foot siderail support bracket
- The locking system of the TotalGuard™ foot siderail support

YES YES YES



NO NO NO



The entire electrical system should be inspected by an approved after sales service person on an average of once every three years in order to ensure continuing operation in optimal condition.

NOTES:

Chapter 6
Accessories

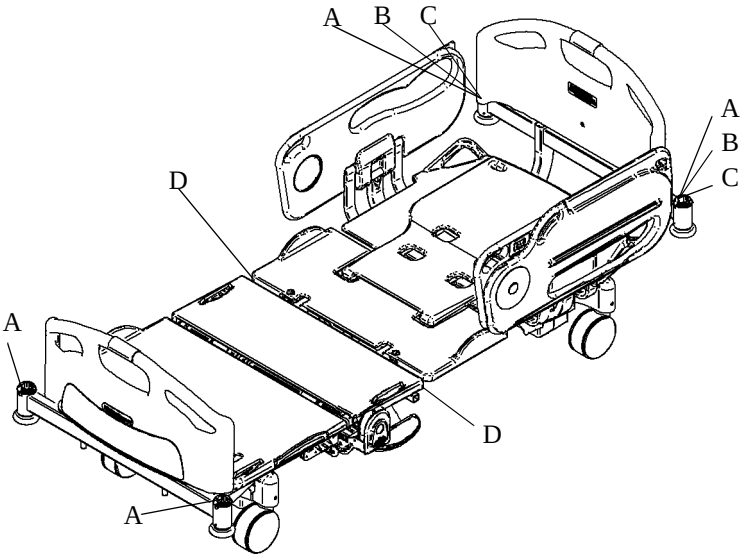
Accessories

⚠ CAUTION:

The accessories shown are not designed to be used all at the same time. Some combinations can interfere with certain functions. Combining accessories could result in equipment damage. Some accessories are specific to certain versions and must not be installed on other versions.
It is advisable to ensure that the accessories/features are mutually compatible.

⚠ WARNING:

Personnel should take care that the weight and the loads on the accessories do not exceed 20kg. Patient injury, personal injury, or equipment damage could result (the patient helpers are not affected by this limit).



A: I.V. pole* B: Patient helper*

C: Oxygen cylinder holder* D: Accessory support

Patient Helpers

This accessory must only be fitted at the head of the bed.

Fixed patient helper (AD080B)

Safe Working Load: 75 kg (165.35 lb)[1]

WARNING:
Do not position the patient helper at the outside of the bed. See incorrect position shown below. Patient injury or equipment damage could result.

The patient helper can be fitted into either of the two square sockets at the head of the bed.

Place the patient helper in the socket so that the patient handle is over the bed.

Correct position

Incorrect position

Adjustable Patient Helper (AD081C)

Safe Working Load: 75 kg[1].

The adjustable patient helper (three positions) can be fitted into either of the square sockets at the head end of the bed.

Place the patient helper in the socket so that the patient handle is over the bed and so that the patient helper arm is in the normal egress position (see photo opposite).

1. Safe Working Load specification allowing for a substantial safety margin.

Patient Helper Positioning

WARNING:

The patient helper in the patient transfer position is designed to help the patient lift some of his/her weight so as to assist the nursing staff with their work. This position is not designed to allow patients to transfer themselves alone.

Tuck-away position

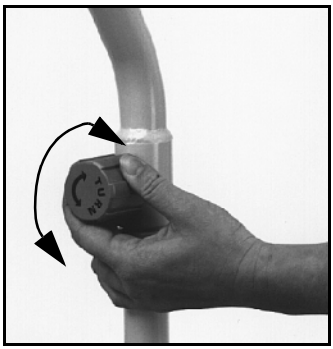
Normal (egress) position

Patient aid transfer position

Use the blue knob marked "TURN" to adjust patient helper position.

To adjust patient helper position:

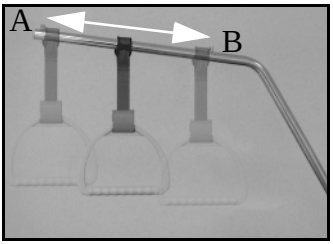
- Turn the blue knob a quarter turn clockwise to unlock the patient helper.
- Place the patient helper in the required position.
- Turn the knob anticlockwise to lock in position.
- Turn the patient helper slightly until it locks into place.
- Pull the patient helper to ensure that the position is secure.



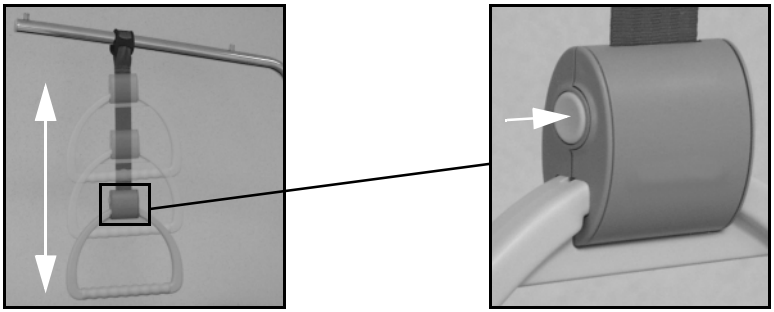
Patient helper handle

WARNING:

The patient helper handle must be positioned between lugs A and B to avoid any danger of slippage. Failure to do so could result in patient injury or equipment damage.



The patient handle on the patient helper can be adjusted according to the patient's preference.



To adjust the height of the handle, push on the locking mechanism button, adjust the height and release the button.

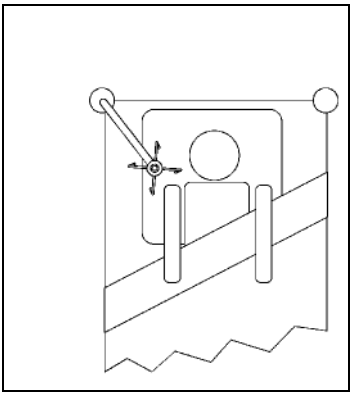
Check the locking mechanism by pulling on the patient handle.

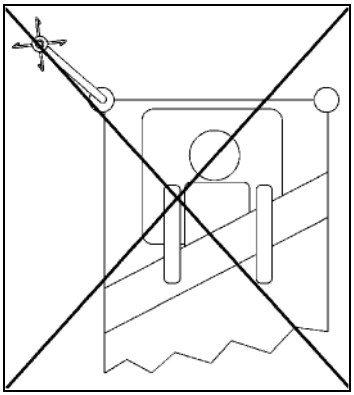
Place the patient handle on the patient helper arm when not in use, in order eliminate any obstruction.

If the bed is equipped with both an adjustable patient helper (AD081C) and an I.V. Pole (AD082A), do not use the patient helper "tuck-away" position as this may interfere with the I.V. pole.

Telescopic I.V. pole

CAUTION:
Ensure that the I.V. pole is positioned facing towards the bed and not outwards as shown in the following illustrations.





Safe working load:
Refer to the value indicated on the I.V. pole [1]

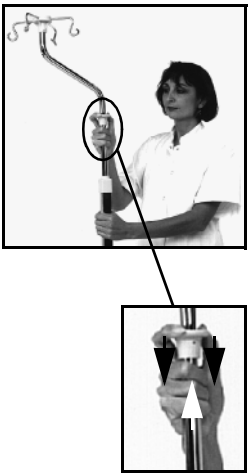
Using the I.V. pole (AD082A)

To raise the I.V. pole:

- Hold the square part of the pole with one hand and raise the upper part to the desired height.

To lower the I.V. pole:

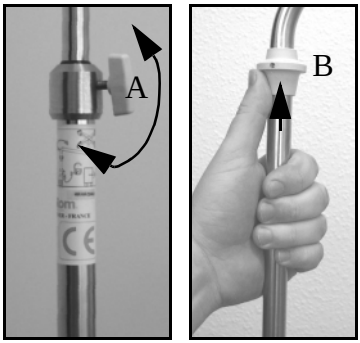
- Hold the upper part of the pole firmly and lift slightly while pressing downward on the plastic sleeve with two fingers of the same hand.
- Lower the pole to the required height.
- Release the sleeve.



ACCESSORIES

1. The safe working load specifications allow for a substantial safety margin.

Using the I.V. pole (AD165A)



To raise or lower the I.V. pole:

- Loosen the threaded knob (A), while holding the lower pole to prevent it from lifting out of the accessory socket.
- Firmly grip the upper pole with the other hand just below the plastic collar (B).
- Push the plastic collar up with the thumb.
- Lower the pole to the required height.
- Tighten the threaded knob (A).

To swivel the I.V. pole:

- Loosen the threaded knob (A).
- Adjust the upper pole to the desired angle while respecting the safety recommendations.
- Tighten the threaded knob (A).

Monitor Stand (AD128A)

Safe working load: 15 kg[1]

The monitor stand fits into the sockets at the foot of the bed.

WARNING:
When fitting the monitor, ensure that the folded table is located on the outer edge of the bed.
The table must be folded away when moving the bed.
If the bed is in Trendelenburg or Reverse Trendelenburg, any device that is used must be secured to the monitor stand. Failure to do so could result in patient injury or equipment damage.

NOTE:
Introduce both ends simultaneously to avoid the frame getting jammed in the sockets.

1. The safe working load specifications allow for a substantial safety margin.

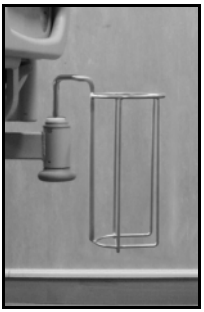
To fit a monitor stand:

- Unscrew the two knobs from the frame.
- Fit both ends of the frame into the sockets at the same time.
- Fit the knobs through the under side of the socket and tighten.
- Pivot the stand as shown in the photo below, so that it is above the sleep surface.

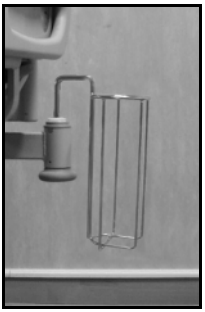
Oxygen Cylinder Holder (AC959A-AD101A-AD102A)

Safe working load: 15 kg[1]

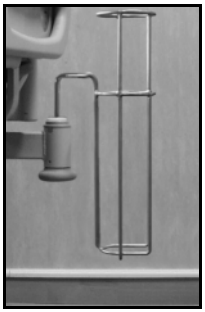
The oxygen cylinder holder is designed to accept an oxygen cylinder and must only be fitted on the patient helper supports at the head end of the bed outside the sleep surface. It can be rotated through 90°. Each type of holder corresponds to a cylinder model and must never be used with a different cylinder. See below.



AC959A for cylinder model B5 (Ø140)



AD101A for cylinder model D (Ø100)

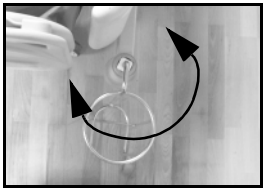


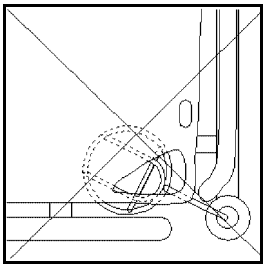
AD102A for cylinder model E (Ø100)

1. The safe working load specifications allow for a substantial safety margin.

⚠ WARNING:

The following recommendations are designed to prevent any possible incidents so that this accessory can be used in optimum safety conditions for both the patient and nursing staff.



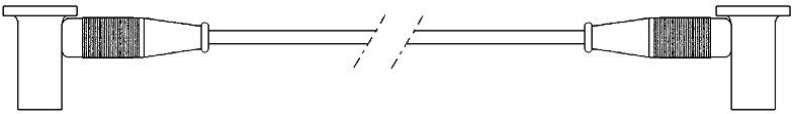


- Check that the cylinder is correctly positioned at the base of the cylinder holder.
- Never use a different oxygen cylinder model from the model that is specified above (danger of dropping the cylinder or interfering with various operations could occur).
- Pay close attention to the position of the cylinder holder (particularly if it is under the head section or the siderail) when setting the Reverse Trendelenburg position or when lowering the sleep surface.
- Prevent any impact when moving a bed equipped with a cylinder holder to another room (especially doorways).
- If the cylinder holder does not allow the bed to go through a doorway, position the holder in front of the bed, otherwise place it and the cylinder on the mattress (remember to put the holder in its normal position after moving the bed).

Equipotential cable (AD968A)

This cable is designed to connect a metallic accessible part of some medical intravascular or intracardiac equipment to the bed.

It consists of two POAG-WB 6 DIN type connectors and a 2m long yellow and green cable.



Syringe-driver holder (AC963A)

Safe working load: 15 kg[1]

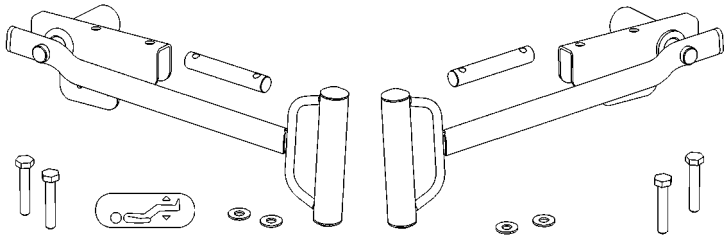
WARNING:
Do not position the accessory facing inwards, particularly under the head section when it is raised, so as to prevent any risk of the accessory obstructing the head section or siderail when being handled.

This accessory is designed to accept a syringe-driver and is fitted at the head end of the bed in the sockets provided.

1. The safe working load specifications allow for a substantial safety margin.

MobiBar® egress handle (AD177A)

WARNING:
This accessory must be fitted by an authorized technician. Failure to do so could result in patient injury or equipment damage.

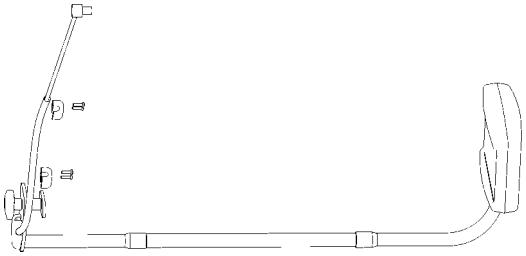


Please refer to the fitting instructions provided with the accessory when fitting the accessory.

For usage, refer to “MobiBar® egress handle*” page 4-42.

Control unit on a flexible arm

WARNING:
This accessory must be fitted by an authorized technician. Failure to do so could result in patient injury or material damage.



Please refer to the fitting instructions provided with the accessory when fitting the accessory.

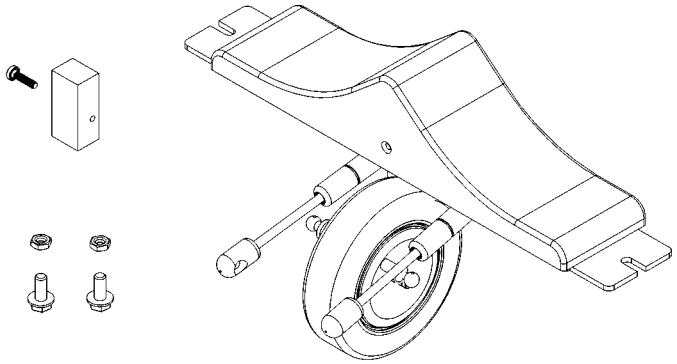
Please refer to “Control unit on a flexible arm*” page 4-43 for usage instructions.

Self-steering 5th Wheel (AD135A)

⚠ WARNING:
This accessory must be fitted by an authorized technician. Failure to do so could result in patient injury or equipment damage.

Please refer to the fitting instructions provided with the accessory when fitting the accessory.

Please refer to “with self-steering 5th wheel (*):” page 4-29 for usage



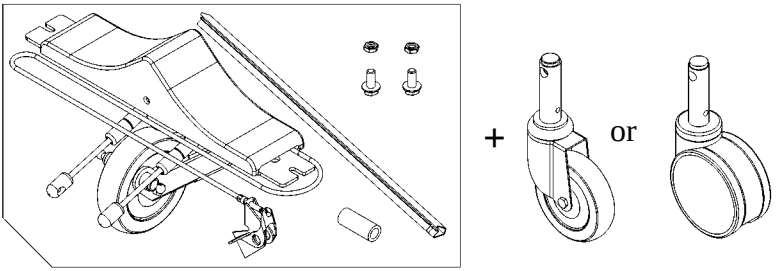
instructions.

Controlled 5th wheel (AD180A)

⚠ WARNING:
This accessory must be fitted by an authorized technician. Failure to do so could result in patient injury or equipment damage.

Please refer to the fitting instructions provided with the accessory when fitting the accessory.

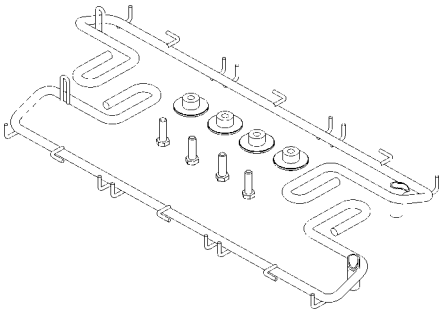
Please refer to “with controlled 5th wheel *:” page 4-30 for usage instructions.



Accessory support bar (AD126A)

WARNING:
The accessory must be fitted by an authorized technician. Failure to do so could result in patient injury or equipment damage.

Please refer to the fitting instructions provided with the accessory when fitting the accessory.

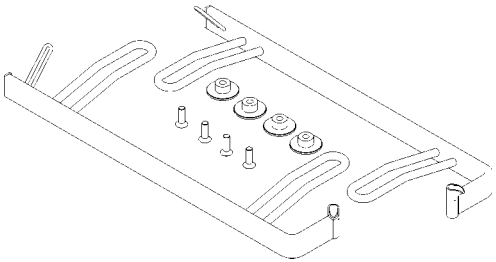


For usage, refer to “Accessory support bar*” page 4-46.

Medical device support rail (AD127A)

WARNING:
The accessory must be fitted by an authorized technician. Failure to do so could result in patient injury or equipment damage.

Please refer to the fitting instructions provided with the accessory when fitting the accessory.

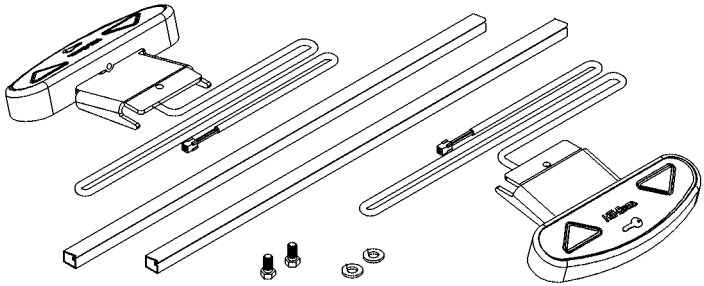


For usage, refer to “Medical device support rail*” page 4-47.

Bilateral HiLow pedal (AD171A)

WARNING:
The accessory must be fitted by an authorized technician. Failure to do so could result in patient injury or equipment damage.

Please refer to the fitting instructions provided with the accessory when fitting the accessory.



For usage, refer to “Bilateral HiLow pedal*” page 4-17.

Enable control pedal (AD179A)

WARNING:
The accessory must be fitted by an authorized technician. Failure to do so could result in patient injury or equipment damage.

Please refer to the fitting instructions provided with the accessory when fitting the accessory.

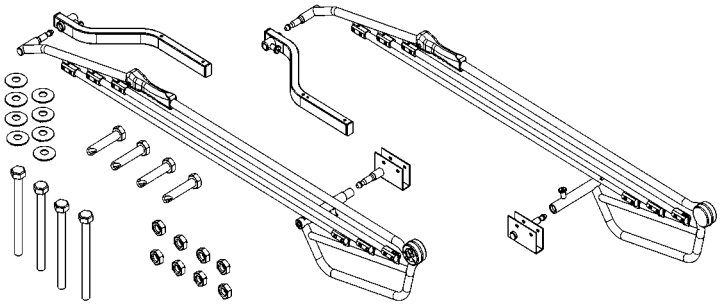
For usage, refer to “Activating/deactivating function management” page 4-14.

Long metal siderails (AD178A)

WARNING:
The accessory must be fitted by an authorized technician. Failure to do so could result in patient injury or equipment damage.

Please refer to the fitting instructions provided with the accessory when fitting the accessory.

For usage, refer to “Long metal siderails*” page 4-7.



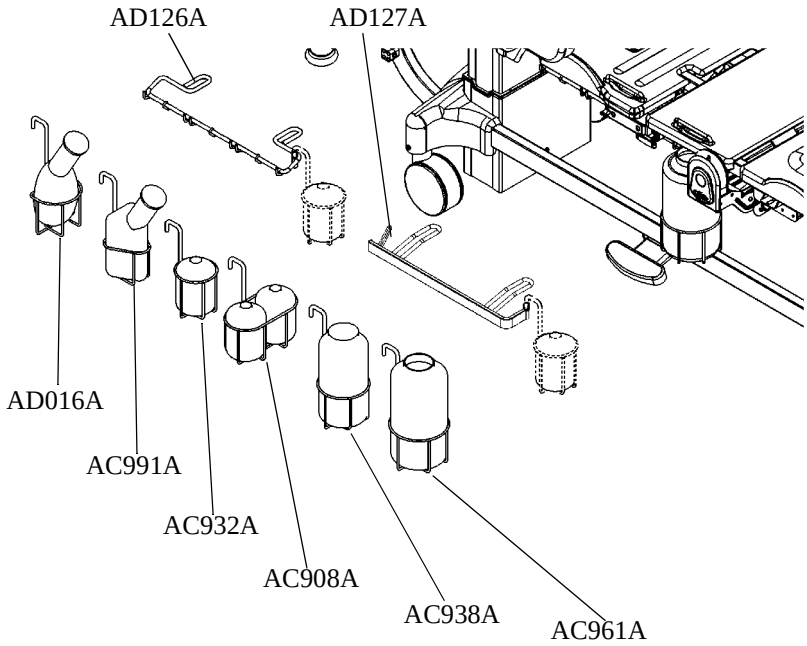
Mattress

For more effective and safer use of this bed, Hill-Rom, recommends mattresses that follow the safety recommendations in “Mattress” page 8-4.

The AvantGuard® bed can be used optimal conditions of comfort and safety by choosing one of the mattresses described in paragraph “Accessories” page 2-10.

Other mattresses that meet the conditions can also be used. Make sure that the bed/mattress combination obeys the safety instructions shown in paragraph “Mattress” page 8-4.

Accessory holder



NOTES:

Chapter 7
Shipment, storage and usage

Transport, Storage

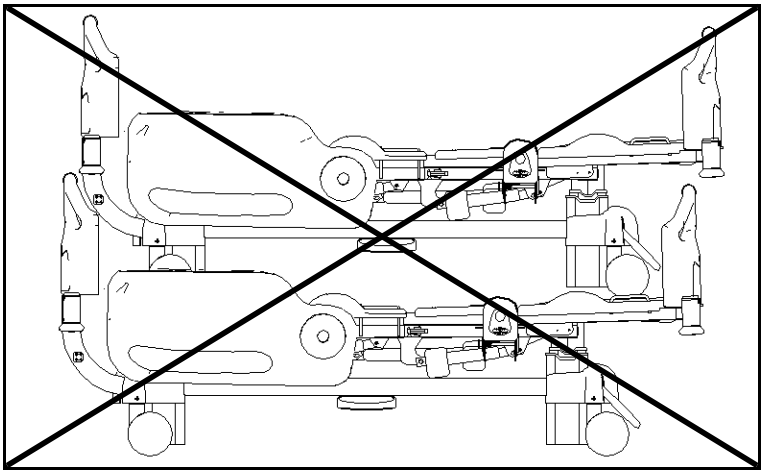
All the necessary precautions must be taken to ensure that the bed and its accessories are shipped and stored in complete safety under optimal conditions.

The following conditions must be met.

During shipment[a], the bed must be:	When stored, the bed must be:
in the “low” position,	in the “low” position,
all electrical functions locked out,	all electrical functions locked out,
covered, brakes applied and all moving parts secured,	covered, brakes applied,
protected from fluid ingress,	protected from fluid ingress,
at a temperature of between -10° and +50°C (+14° and +122°F)	temperature between -10° and +50°C (+32° and +104°F)
Humidity: 20% to 80% at 30°C (86°F)	Humidity: 20% to 80% at 30°C (86°F)
pressure: 500hPa to 1060hPa (0 to 2000m)	pressure: 500hPa to 1060hPa (0 to 2000m)

a. Shipment means the moving of the bed between facilities, not patient transfer within the facility.

During shipment or storage, beds should not be stacked one on top the other.



Use

The bed must be used in the following conditions:
temperature between 0° and +104.00°F (+32° and +104°F)
Humidity: 20% to 80% at 30°C (86°F)
pressure: 700hPa to 1060hPa (0 to 2000m)

⚠ WARNING:

If the bed is equipped with a battery, and the bed is stored for long periods of time, the battery must be charged every 3 months. Ignoring this recommendation risks damaging the battery and the unavailability of functions without AC power.

NOTE:

Before use, refer to “First Steps” page 3-1.

Chapter 8
Safety tips and precautions

Safety Tips

Brake and steer

⚠ CAUTION:

Risk if not locked:

The patient may fall if he leans on the bed to get in or out of the bed.

Ensure that the brakes are applied if the bed is not to be moved or if the patient is to be left unattended (See “Brake and steer system” page 4-28).

Try moving the bed to ensure that the wheels are locked.

Patients should be moved with the bed in mid hilow position by two people.

Ensure that the accessories (patient helper, I.V. Pole, etc.) will not interfere with progress through doorways, other passages, or overhead lights.

Ensure that the power cable is disconnected and correctly secured (See “Securing the power cable” page 4-32).

Bed Position

The bed should be kept in the lowest hilow position to help to reduce the risk of patient falls, especially when left unattended.

Use the HiLow feature of the sleep surface to adjust the bed to the required height when the patient is undergoing treatment.

Trendelenburg/Reverse Trendelenburg and Emergency Trendelenburg

⚠ CAUTION:

The patient's safety may be jeopardised in the absence of a Reverse Trendelenburg feature in cases of haemodynamic shock or severe breathing difficulties.

The patient must never be left unattended while the bed is in Trendelenburg. Failure to observe this precaution could result in patient injury or equipment damage.

Trendelenburg/Reverse Trendelenburg and emergency Trendelenburg (required in intensive care units) must only be operated under the supervision of or by trained nursing staff.

⚠ CAUTION:

Sufficiently qualified nursing staff determine the usage condition suitable for this function and degree of supervision to ensure that the patient uses the bed safely.

⚠ WARNING:

Before setting in the “Shock” position, it is imperative to lower the siderails.

Integral Siderails

The siderails should be raised and locked when a patient is left unattended. The siderails are designed to help reduce the risk of patients falling out of bed accidentally. They are not designed to restrain or immobilize the patient. Restraining straps or other devices must not be fastened to the half-length siderails (e.g., straps).

In the case of patients suffering from particular behavioral difficulties (agitation, mental confusion, loss of sense of direction, weakness, etc.), properly trained medical staff should ascertain how the siderails should be used and whether the patient should be monitored closely to ensure patient safety.

Medical staff should note the risks involved in the use of siderails of any model or type with particularly old, frail, restless, disorientated or confused, and obsessive patients.

Certain national health authorities have issued guidelines on how to reduce these hazards, as indicated below.

It is recommended that patients with health or behavioural problems of this type be identified in each establishment or ward so that the safety measures most appropriate to their particular needs can be implemented (see above).

One measure which has already proved effective is to draw up a protocol (if such a protocol is not already in place) specifying:

1. Situations and conditions for siderail use and authorised mattress type.
2. Situations and conditions for patient immobilization.
3. Patient monitoring procedures, both for restrained and unrestrained patients, and procedures for the monitoring of straps, etc.
4. Should it be necessary to restrain a patient using special equipment, follow the manufacturer's instructions carefully.

Use of a mattress thicker than the recommended 175 mm may reduce the effectiveness of the siderails in preventing falls. In such cases, the patient must be monitored closely. The recommendations below may contribute to patient safety.

- Always keep the bed in its lowest Hi-Low position when the patient is left unattended.
- It is not possible to ensure the compliance of all mattresses with our recommendations, given the many different types of mattresses available. For safety reasons, we recommend that users pay particular attention to mattress dimensions with regard to siderail height.
- Mattresses are not all interchangeable. Hill-Rom, shall in no way be held liable for problems arising from the use of siderails or mattresses produced by other manufacturers, which do not comply with the recommendations set out in this manual.

Implementing the recommendations listed above should help to reduce accident hazards.

Mattress

Only mattresses recommended by Hill-Rom, should be used.

In order to reduce the risk of the mattress sliding, it is recommended that the mattress be placed between the raised edges and that it is laid correctly on the sleep surface.

Should you wish to use a mattress other than those recommended, please ensure that it is compatible with the Hill-Rom, bed model and that it will not have any adverse effect on performance, quality, or safety.

The beds are designed for use with standard size mattresses (length: 195-200 cm, width: 83-90 cm and thickness: 175 mm) suitable for the sleep surface dimensions.

⚠ CAUTION:

If the bed is fitted with an electrically powered air mattress, the power cord must be routed so as to prevent it from being cut by the moving parts of the bed. Failure to observe this precaution could result in patient injury or equipment damage.

If the mattress power cord is unplugged, it is advisable to store it on one of the headboard supports (see "Securing the power cable page 4 - 32 or on the support provided by the mattress supplier).

Headboard

⚠ WARNING:

The headboard bars are not intended to receive accessories, accessory support device or any means of immobilization of the patient (e.g.: straps).

⚠ WARNING:

The headboard bars are not intended to be used as handles during transfer of the bed.

Cleaning and recommended cleaning fluids

Always disconnect the bed from the mains power supply before cleaning (see "General Advice" page 5-2).

Only use recommended cleaning fluids and products (see "Recommended Materials and Products" page 5-3).

Electrical function management

The electrical function management controls prevent any unintended bed movements that might cause injury to the patient (for instance when under traction, etc.). It is highly recommended that functional lock out should be used whenever a patient is undergoing examination or treatment or when the bed is being serviced or moved. Functions should also be locked out when the patient is left unattended and if the nursing staff believe that the patient is not capable of operating the controls independently with safety.

It is thus the responsibility of the nursing staff to authorize the patient to use certain bed functions, including the HiLow.

Parts and accessories

CAUTION:

Never modify the bed without the manufacturer's prior consent. Alterations could result in injury to the patient or damage to the bed.

Only use manufacturer's parts and accessories.

Patient helpers

Suitably qualified medical personnel must determine if the patient helper can be left at disposal or not of patients suffering from particular behavioral conditions (e.g.: not limited to but including agitation, mental confusion or loss of sense of direction, behavioral disorders, or weakness) and that in order to use the bed in best safety conditions.

Electrical safety precautions

SHOCK HAZARD:

When direct intravascular or intracardiac connections are in use, the electric potentials of all the unprotected metal parts need to be equalized.
The bed must be connected to the mains power supply.

SHOCK HAZARD:

In an environment where the electrostatic discharges are prevalent we recommend using our antistatic casters.

All power connections must comply with standards as defined in (See "Connection to the Mains Power Supply" page 3-2).

In compliance with standards relating to electromagnetic interference for medical equipment, this product does not interfere with other medical devices or is not susceptible to interference when combined with other medical devices that also comply with the electromagnetic standards in force.

Some devices, particularly older ones that do not comply with the electromagnetic compatibility standards, may however undergo interference or may themselves interfere with the working of this product.

The users of such devices are responsible for ensuring that any malfunctions will not endanger the patient or any other person.

Ensure that the power cord is unplugged and hooked to the bed before moving the bed (See "Securing the power cable" page 4-32).

Only duly qualified and authorized staff should carry out electrical maintenance.

Never clean or service the bed without unplugging it from the mains power supply and disconnecting the battery.

The battery backup must never be left in direct contact with fire, placed in liquid, or discarded in a refuse bin. In the event of the battery being damaged, see "De-commissioning page 8 - 8.

Use only nasal tubes and oxygen masks.
For reasons of safety, masks and tubes should always be kept at a higher level than the sleep surface.
Always lock out the Hi-Low function before any operations other than cleaning or maintenance.

Abnormal use

CAUTION:

Abnormal use may result in damage to the bed and injury to patients or staff.

Examples of abnormal use:

- Use of the bed for any purpose other than for general or intensive care.
- Use of the bed in a hyperbaric chamber.
- Use of bed, functions, accessories or bed movement by persons who do not have the ability to operate the bed safely
- Operation of electrical functions by several persons at the same time.
- Placing objects or equipment on the chassis or using it to support a person.
- Use of the bed with a loads over 185 Kg (Safe Working Load).
- Connection to a non standard power supply.
- Connection of other electrical appliances to the bed.
- Use of accessories and equipment other than those specified by the manufacturer.
- Pulling on the power cord to move the bed.
- Moving the bed when the 5th steering wheel with controlled operation is active.
- Washing with excessive water or high pressure jet or in a tunnel wash.
- Use outdoors or in a vehicle.
- Climatic constraints (operation/storage) other than those specified by the manufacturer.
- Use of the bed in an atmosphere presenting a risk of explosion.
- Moving the bed over soft ground or over inappropriate surfaces.
- Moving the bed along slopes of over 10° (with or without a patient).
- Actuator or column overload (see intermittent operation in paragraph “Technical specifications” page 9-1).

- Use of oxygen tent type respiration devices or devices that extend below the sleep surface.
- Use of the bed in the presence of flammable gas or vapours.
- Use at unauthorized temperatures (not between 0°C and 40°C).
- Any use not complying with the instructions for use described in this manual.
- Any other use which does not comply with normal use of a hospital bed or its stated purpose.

De-commissioning

The bed and its accessories should be cleaned and disinfected before de-commissioning.

De-commissioned equipment materials (plastics, electrical components, etc.) must be recycled in accordance with local recycling regulations. Please, previously check and comply with the local environmental policy (Directive 2002/95/CEE).

As regards the battery:

•Never dispose of the lead-acid dry fit battery which contains substances and dangerous metals for the environment and the health.

Life expectancy of components

The bed and its listed elements below were designed to be used, under normal conditions according to the instructions for use and maintenance, with an expected life of approximately:

Element	Expected life
Electric actuators	5 years
Gas springs	5 years
Power supply	10 years
Frame	10 years

NOTE:
It is the responsibility of the facility to implement a preventive maintenance program for the bed's functions under its conditions of use.

Chapter 9
Specifications and warranty

Specifications

Hill-Rom has an ongoing continuous improvement policy. Therefore specifications are liable to be altered without notice.

Technical specifications

Type		AvantGuard®	
Reference[a]		LI158Bx/Model 1200	
Class according to IEC 60601-1		Type B	
Protection against harmful ingress of water (according to IEC 60529)		IPX4	
Safe working load:		185 kg - 210 kg[b]	
Intermittent operation		10% (3min/30min)[c]	
Maximum lifting load		551.16 lb	
Bed weight (no mattress or accessories)		330.69 lb	
Electric shock protection		Class I	
Voltage	230V AC*	120V AC*	100V AC*
Frequency	50-60 Hz	50-60 Hz	50-60 Hz
Power supply unit maximum power load	360 VA	360 VA	360 VA
Power supply unit fuse rating	2 A T	2.5 A T	2.5 A T

a. See “Bed model and country of use” page 1-3.

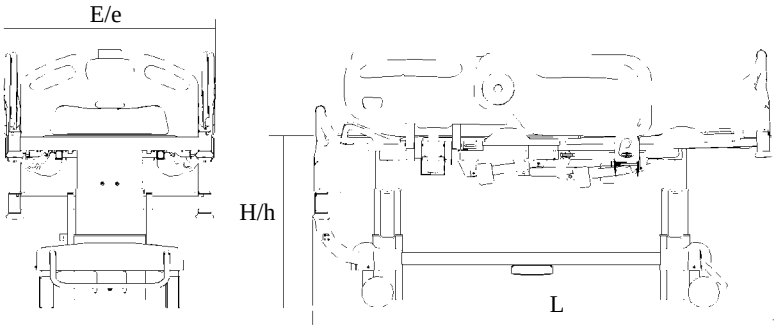
b. If the total load (patient, mattress, and accessories) reaches between 185 kg and 210 kg, the overload protection of the bed electronics may be activated depending on the weight distribution on the bed. When a function is selected that is overloaded, an alarm will sound and stop the selected movement. This overload protection will not interfere with the emergency CPR function.

c. Do not operate electrical functions continuously for more than 3 minutes in any 30 minute period when the bed is loaded at the safe working load value as this may damage electrical components.

Dimensions

Min. TotalGuard™ siderail width (with siderails up) (e)[a]	1000 mm
Max. TotalGuard™ siderails width (with siderails up) (e)[a]	1060 mm
TotalGuard™ siderails width (with siderails down) (e)	970 mm
Long metal Siderails width (e)	996 mm
Bed width (with polypropylene endboards) (E)	990 mm
Bed width (with Medispace™ endboards) (E)	1045 mm
Bed width (with Séquoia endboards) (E)	1045 mm
Bed width (with Medic'hotel™ endboards) (E)	1000 mm
Bed length with extension and polypropylene endboards (L)[b c]	2405 mm
Bed length without extension and polypropylene endboards (L)[c]	2225 mm
Bed length with extension and wooden endboards (L)[b c]	2400 mm
Bed length without extension and wooden endboards (L)[c]	2220 mm
Minimum height (single band 150mm diameter casters) (h)	415 mm[d]
Minimum height (single band 125 mm diameter casters) (h)	393 mm[d]
Maximum height (single band 150 mm diameter casters) (H)	815 mm[d]
Maximum height (single band 125 mm diameter casters) (H)	793 mm[d]

a. All bed versions can pass through doorways with a clearance greater than 1050 mm **when the siderails are down**.
b. According to features chosen
c. Extension fully extended
d. Add 5 cm for a bed equipped with the "Hi-Low 45 to 85 cm" function.



Specifications

Maximum inclination with respect to horizontal	Head section	Thigh section	Foot section	Reverse Trendelenburg / Trendelenburg
	+ 65 °	+ 36 °	- 23 °	+16 °/-16 °

NOTE :
These are average values, which may vary according to manufacturing tolerances.

Warranty and after sales service conditions

The warranty for our beds will be rendered null and void, in part or in total, in the event of:

- Unauthorized interference with or incorrect maintenance of:
    - actuators,
    - electrical drives and components,
    - mechanical systems,
- any abnormal use,
- use of parts and accessories not authorized by the manufacturer,
- use of unauthorized cleaning procedures,
- any use, including cleaning and servicing, that does not comply with the instructions in this manual.

The details of after sales service contacts in your country are shown on the back of this manual.

Compliance

NF MEDICAL

CE

– NF MEDICAL “Hospital beds” compliant authorization N°: NF178-01/01-33

– Complies with standards:
    - NF-S-90-312 (1984),
    - EN-60601-1 (1996),
    - EN-60601-1-2 (2001),
    - EN-60601-2-38 (1999),
    - IEC-60601-2-38 Amendment 1 (1999).

– Complies with essential requirements of EC directive 93/42/EEC applicable to class I medical equipment.